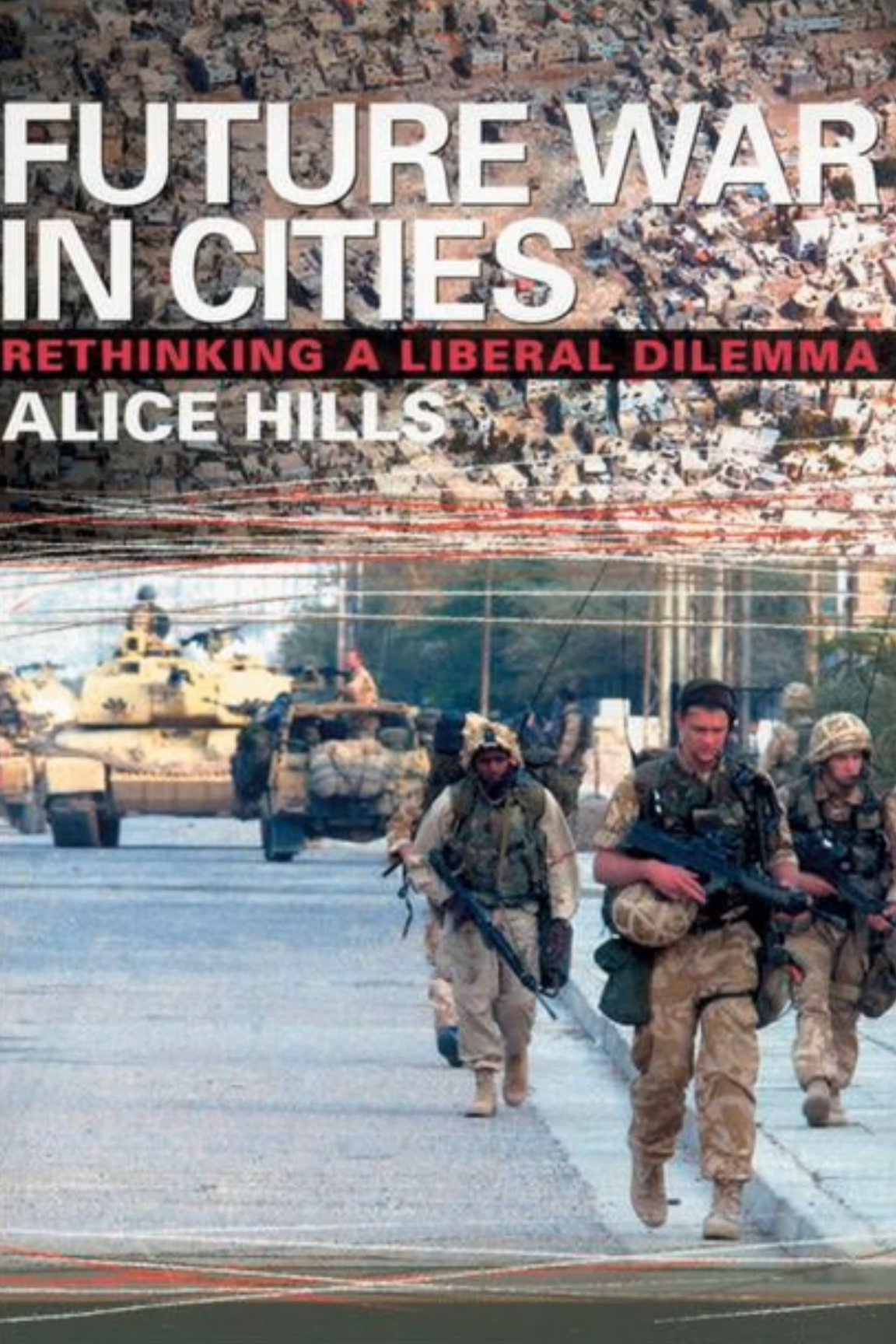
FUTURE WAR IN CITIES

RETHINKING A LIBERAL DILEMMA

ALICE HILLS



FUTURE WAR IN CITIES

FUTURE WAR IN CITIES

Rethinking a Liberal Dilemma

ALICE HILLS
UK Joint Services Commission
and Staff College at King's College, London

FRANK CASS
LONDON · PORTLAND, OR.

First published in 2004 in Great Britain by
FRANK CASS PUBLISHERS
11 New Fetter Lane,
London EC4P 4EE

and in the United States of America by
FRANK CASS PUBLISHERS
29 West 35th Street,
New York, NY 10001

This edition published in the Taylor & Francis e-Library, 2004.

Website: www.frankcass.com

Copyright © 2004 A. Hills

British Library Cataloguing in Publication Data

Hills, Alice, 1950–
Future war in cities: rethinking a liberal dilemma
1. Urban warfare
I. Title
355.4'26

ISBN 0-203-32312-2 Master e-book ISBN

ISBN 0-7146-5602-X (cloth)
ISBN 0-7146-844-5 (paper)

Library of Congress Cataloging in Publication Data

Hills, Alice 1950–
Future War in Cities: rethinking a liberal dilemma/Alice Hills
p.cm
Includes bibliographical references and index.
ISBN 0-7146-5602-X (cloth) – ISBN 0-7146-8494-5 (pbk)
1. Urban Warfare. I. Title.
U167.5.S7H55 2004
355.4'26–dc22

2003069762

All rights reserved. No part of this publication may be reproduced, stored in or introduced into a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior written permission of the publisher of this book.

Contents

List of Illustrations ix
Abbreviations and Glossary xi
Preface xv

PART I: Rationalities
1 Cities and Military Operations 3
Urban Operations 5
The Operational Environment 16
Future Conflict 22
Expanding Understanding 24
Key Assumptions 26
Structure of Analysis 28

2 Thinking about Urban Operations 36
Doctrine 40
Characteristic Approaches to Urban Operations 56

3 Technology and War 64
The Lure of Technology 66
Airpower 71
Multinational Urban Operations 79
Technology's Supporting Role 82

PART II: Wasteland

4 Policing **91**
Categorising Operations 93
Environmental Challenges 95
The Military Task 97
The Limits of Policing 108
Unanswered Questions 110

5 Enforcement **117**
Unpredictable Operations 119
Tactical Skills 130

6 Warfighting **139**
Urban War 140
Transitional Wars 149
Grozny 151
Enduring Features 159

PART III: Reconstruction

7 The Evolution of War **173**
Defining Security 174
Conflict and Development 176
Expanding Operations 180
Making War and Peace 188

8 Controlling Non-combatants **197**
Controlling Cities 199
Targeting Civilians 201
Control Variables 209
Control and Infrastructure War 214

9 The Intractable Nature of Urban Operations **220**
Analytical Challenges 223
Moral Challenges 228
Controversy over Weapons 230
Reconciling the Irreconcilable 237

10 The Logic of Urban Operations **242**
An Urban Operations Hypothesis 243
Rebalancing Tactics and Strategy 246
Future Operations 251
Conclusions 258

Afterword 264
Appendix: Literature Sources 267
Representative Material 267
Journals, Magazines and Newsletters 268
Internet Resources 269
Film/Video 270
Select Bibliography 271
Index 282

Illustrations

1. Stalingrad, *c.* 1943.
2. Monte Cassino, April 1944.
3. Berlin, August 1945.
4. Hue, 1968.
5. View of Crater, Aden Town, from the south, *c.* 1965. The Main Pass is in the background.
6. The ruins of Vukovar after the 1991 siege.
7. US forces patrolling in Mogadishu, 1993.
8. Combat support in Grozny, 1995.
9. A foot and mobile patrol from Imjin Coy, IRGBW, Kosovo, 1999.
10. Soldiers from the US Army's 504 Parachute Infantry Regiment and UN police conduct a house-to-house search for weapons in Mitrovica, Kosovo, February 2000.
11. An ISAF vehicle negotiating the narrow streets of Kabul, Operation Fingal, 2002.
12. A soldier from 7 Regiment Royal Horse Artillery explains ISAF's mission with the help of an interpreter and a loud-speaker system, Operation Fingal, Kabul, 2002.
13. Royal and US Marines advance in Basra, Operation Telic, 2003.
14. An Irish Guard NCO watching a street corner in Az Zubayr, Iraq, Operation Telic, 2003.
15. A heavy machine-gun team keeps watch over an area of Basra, Operation Telic, 2003.

16. A British security checkpoint to guard against paramilitaries during Operation Telic, 2003.

Abbreviations and Glossary

The terms below are compatible with UK doctrine or are in common usage. For definitions in compliance with US doctrine see Joint Publications 1-02, *Department of Defense Dictionary of Military and Associated Terms*, 23 March 1994 as amended 24 January 2000 (www.dtic.mil/doctrine/jel).

ABCA	American, British, Canadian and Australian Armies program
ACTD	Advanced Concept Technology Demonstration program
APC	armoured personnel carrier
battlespace	all aspects of air, surface, subsurface, land, space and electromagnetic spectrum
battlespace control	integration and synchronisation of all systems and effects within a commander's battlespace
CALL	Center for Army Lessons Learned
campaign	sequence of military operations (sequential or cumulative) that are intended to achieve a strategic or operational objective within a given time or space
CAS	close air support
CDM	command detonated mines
CIMIC	civil–military co-operation
CIVPOL	multinational civilian police

COIN	counterinsurgency
collateral damage	damage to personnel and property adjacent to but not forming part of an authorised target
command	authority vested in a designated commander to direct, co-ordinate and control military forces
control	authority vested in a commander over subordinates or organisations not normally under his control, which may be transferred or delegated
cyberspace	sum of the world's communication links and computational nodes
C4I	command, control, communication, computers and intelligence
C4ISR	command, control, communications, computer-based intelligence, surveillance and reconnaissance
DoD	Department of Defense (US)
DFID	Department for International Development
DTRA	Defense Threat Reduction Agency
EU	European Union
FIBUA	fighting in built-up areas
FINABEL	France, Italy, Netherlands, Germany, Belgium, Luxembourg, UK, Spain, Greece and Portugal
FIST	Future Integrated Soldier Technology programme
FLN	National Liberation Front (Algeria)
GPS	global positioning system
HMMWV	high-mobility multipurpose wheeled vehicle
IDF	Israeli Defence Force
IGO	intergovernmental organisation
IPB	intelligence preparation of the battlefield
IRA	Irish Republican Army
ISAF	International Stabilisation and Assistance Force
ISR/ISTAR	intelligence, surveillance, target acquisition and reconnaissance
JDAMs	joint direct attack munitions
JSTARS	joint surveillance target attack radar system
KFOR	Kosovo Force
MACP	military aid to the civil power
MANPADS	man-portable air defence systems

MCWL	Marine Corps Warfighting Laboratory
mission	statement of a commander's task
mission creep	tendency for operations to broaden in scope and lengthen in time
MoD	Ministry of Defence (UK)
MOUT	military operations on urbanised terrain
NATO	North Atlantic Treaty Organisation
NBC	nuclear, biological and chemical
NCO	non-commissioned officer
NGO	nongovernmental organisation
NITAT	Northern Ireland Training Assistance Teams
NLW	non-lethal weapon
non-combatant	person who does not take a direct part in the hostilities
OBUA	operations in built-up areas
operation	military actions carrying out a military mission
OSCE	Organisation for Security and Co-operation in Europe
PLO	Palestine Liberation Organisation
PSO	peace support operations
RAF	Royal Air Force
RMA	revolution in military affairs
ROE	rules of engagement
RPG	rocket-propelled grenade
RUC	Royal Ulster Constabulary
SAM	surface-to-air missile
SF	Special Forces
SFOR	Stabilisation Force
UAV	unmanned aerial vehicle
UNCIVPOL	United Nations civilian police
UNITAF	Unified Task Force
UNMIK	United Nations Interim Administration Mission in Kosovo
UNO	United Nations Organisation
UNOSOM	United Nations Operation in Somalia
USAF	United States Air Force
USMC	United States Marine Corps

Preface

I base this book on the premise that urban operations have the capacity to become a critical security issue in the twenty-first century. Its consequent objective is to draw on this view to develop understanding of the nature of military force in an era of urbanisation, globalisation, transnational terrorism, new power conflicts and expeditionary warfare. Urban operations warrant this central analytical role because their inherent military logic challenges the West's faith in technology's transformational potential and has the capacity to undermine its currently preferred way of waging war.

Future War in Cities is written as a contribution to the wider study of military operations and contemporary security; its central process is urban operations, but its wider context is the changing security environment, the features of which are revealed in cities. Within a framework analysing conventional operations, the book identifies the contextual factors that systematically affect operations against conventional and asymmetric adversaries in urban environments. It advances an explanation as to why substantive questions of theoretical understanding and policy response are as important as tactical concerns, and why cities will represent a politically significant area in the future battlespace. It demonstrates that urban operations present a unique set of political and moral challenges to policy makers and commanders. It offers a rethinking of the liberal dilemma associated

with the use of force across the entire spectrum of conflict from asymmetric terrorist attacks to major conventional force-on-force operations.

My perspective is that of the Western security community – by which is meant the USA and the countries of western Europe as embodied in NATO and the EU – cultural and political differences exist between the various states, but their broader security problems are interlinked and cannot be reasonably analysed apart from one another. Inevitably, my arguments should be understood as being based on British experience and concerns, but I believe that they have a wider relevance, not least because they balance the US focus of most current analyses. In any case it is no longer possible to consider urban operations as of national concern alone; the processes of internationalisation and the prevalence of multinational operations prevent it. I may criticise British doctrinal development for the extent to which it is content to rely on American analysis and experiment, but I still draw heavily on the impressive work of the US defence community. There is no comparable work in Europe, and US initiatives are carefully monitored, partly out of professional interest and partly because of alliance and national requirements. If, for instance, the nature of coalition operations changes to reflect the widening technological gap between the USA and Europe, decisions will have to be taken on the role of British forces in expeditionary urban operations. Should they form part of a strike force or should they form part of a stability or consolidation force? It is timely to review this pattern of experience, lessons learned and monitoring, not least because of the recent coalition operations in Iraq's cities.

This book was substantially completed before the Iraq war of 2003 brought urban issues to public attention, but its analysis has been reconsidered in the light of Operation Iraqi Freedom. Coalition operations inform its judgement and provide a useful test for the arguments on which it is based. But my argument remains that, despite innovative campaigns against al-Qaeda forces in the mountains of Afghanistan during 2001, and successful warfighting operations against regular and irregular forces in Iraq's urban areas, it is necessary to consider the unique challenges which future war and violence may pose in the cityscapes of the twenty-first century. The coalition's failure to

translate military success into constructive political achievement during the summer of 2003 emphasises this need.

My greatest debt of gratitude is to the British Academy, which awarded me a 'Thank-offering to Britain' fellowship. I also benefited from the generosity of Singapore's Institute of Defence and Strategic Studies, which welcomed me as a research fellow in 2001. Special thanks are due to Dave Dilegge, James O'Sullivan, Pauletta Otis, Tim Thomas and, above all, Duncan Barley, for advice, criticism and support. I am especially grateful to the Joint Services Command and Staff College (JSCSC) students specialising in urban operations on Advanced Command and Staff Courses 4 and 6, and to the college's unfailingly helpful library staff. The JSCSC also gave me the opportunity to interview officers and officials from Australia, France, Hungary, India, Spain, Sweden, Switzerland and the USA. Needless to say, the opinions expressed in the book are nonetheless mine alone and should not be regarded as representing those of any British government agency.

PART I: Rationalities

1 Cities and Military Operations

This book examines the dynamics of military operations on urban terrain. It asks what is special about urban operations and explores what they tell us about the nature of military force in an era of urbanisation, globalisation, transnational terrorism and expeditionary warfare. It considers why urban operations have the potential to become a critical security issue in the twenty-first century, and whether such operations could be as characteristic of the 2020s as peacekeeping was in the 1990s. It assesses the extent to which the violence of urban war balances the transformational potential of digitalisation and of military technology, and questions whether its inherent destructiveness can be reconciled to liberal values. Additionally, it contributes to the argument that anti-terrorist campaigns will be a significant part of future warfare, for terrorists are closely associated with cities and the post-11 September US-led 'War on Terrorism' may result in multiple operations in or against cities.

There have been military operations on urban terrain for as long as cities, towns and villages have existed yet military analysts only recently rediscovered them. The reasons why they rarely received special attention are unclear. It may be because it is more useful to classify operations as counterterrorism, counterinsurgency (COIN) or peacekeeping. Or it may be because there have been few examples of sustained urban combat since 1945. The North Atlantic Treaty Organisation (NATO), after all, ignored urban

fighting during the Cold War; it assumed that war would occur on the north German plain, but never paid special attention to defending the urbanised Rhine–Ruhr region. On the other hand, the Cold War period saw many significant urban exchanges in Palestine (1945–49), Cyprus (1945–59), Suez (1956), Algeria (1954–62), Aden (1964–67), and Northern Ireland (1969–2002).[1] More recently urban fighting has occurred in the Philippines, Lebanon, Palestine and Iraq, while US operations in Vietnam, Grenada, Panama, Somalia and Haiti included strong urban elements. Soviet experience of security operations in Budapest (1956) and Prague (1968) cannot be discounted, while the Russian Army fought three ferocious battles in Grozny (1994–96, 1999–2000).

One thing is clear. Baghdad, Beirut, Belfast, Dili, Freetown, Gaza City, Grozny, Kabul, Mogadishu, Monrovia, Pristina and Sarajevo – all suggest that it will be as difficult to avoid operations in cities in the future as it was in the past. The reason is that one of the most notable global transformations of recent years has been the change from a predominantly rural world to an urban one. The shift has been rapid and its military, political, societal and environmental implications are not yet fully understood. Even so, a number of conflicting trends are now evident. Urban operations are thought increasingly probable even as historical experience suggests that they are costly, vicious and best avoided.[2] Security threats are judged to be more diverse, less predictable and probably less challenging in terms of conventional warfare. They are also potentially more lethal and difficult to manage. Intervention is predominantly discretionary but its context tends to be that of intractable civil conflict, international terrorism or state repression. Operations are subject to restrictive legal and moral rules at the same time as the military remit is expanded, small arms proliferate, asymmetric warfare evolves and novel explosives are developed. Information technology is exploited by both conventional militaries and networked terrorist groups. Defence and security are explicitly linked to developmental issues, introducing new tensions joined to the paradoxical notion of humanitarian war. The memory of the US debacle in Mogadishu in October 1993 remains potent, but asymmetric threats had replaced urban operations as a priority in Western capitals even before the suicide hijackings of 11 September 2001. The resultant tensions and dilemmas suggest it is timely to reassess urban operations.

Most studies of urban operations adopt an historical approach or one tailored to the professional demands of a specific military service. This book instead explores the re-emergence and transformation of urban operations in the context of contemporary security. It looks to the future, rather than the past, considering operations from a theoretical and strategic perspective because this is where the real challenges lie. It is also the area where neglect is most noticeable. For although most studies focus on the tactical level, which is where fighting takes place, urban operations are rarely narrow technical processes.[3] Not only are they shaped by diplomatic, economic and humanitarian objectives, but also treating them as merely one of a range of tactics or environments ignores the fact that urban operations could themselves become a strategic risk, having the potential for strategic change. This has happened with terrorism and there is no reason why it should not happen with cities. In other words, the tactical emphasis is a necessary but not sufficient condition for understanding. Broader issues, such as emergent socio-economic inequalities and power conflicts between the North and the South, must frame urban operations if their potential is to be appreciated. The South is taken here to mean the regions outside the main North American, West European and East Asian economic systems.

Rather than looking back to the battles of Stalingrad or Hue, this book looks forward on the basis of contemporary trends. It acknowledges that there is very little about urban operations that is new but argues that it is precisely this fact that challenges liberal assumptions about the application of military force in an urbanising world. Instead the book is based on the premise that urban operations have the capacity to become a critical security issue in the twenty-first century, and that cities, the archetype of urban terrain, will provide the politically significant areas of the future battlespace.

Urban Operations

The term 'urban operations' refers to the range of operations typically occurring in urban areas, whether cities, towns or villages.[4] It is broader than the American notion of military operations on urban terrain, (MOUT), and it replaces the older British terms

'operations in built-up areas' (OBUA) and 'fighting in built-up areas' (FIBUA). Urban operations are, according to the authoritative US *Doctrine for Joint Urban Operations*, 'operations planned and conducted across the range of military operations on, or against objectives within, a topographical complex and its adjacent natural terrain, where manmade construction or the density of noncombatants are the dominant features'.[5] They include, but are not restricted to, combat: 'This definition is similar to that of military operations on urbanised terrain (MOUT), which is used by the Army and Marine Corps, but MOUT has strong connotations of urban ground combat at the tactical level.' This wider perspective helps balance the historical emphasis on warfighting. It is true that the characteristics and constraints of such operations are most evident during warfighting, which remains the archetypal urban operation. But urban war is comparatively rare whereas counterterrorism and peace enforcement are frequent. The use of urban operations also emphasises that the environment influences the course of all operations taking place in urban areas.

An urban area is a topographical complex in which manmade construction or high population density are the dominant features; it can be an industrialised city, a shanty town or a refugee camp. This use supplements the World Bank's more precise definition of cities in which the terms 'cities' and 'urban areas' are interchangeable (this usage is adopted here):

> The formal definition of urban areas describes them as concentrations of nonagricultural workers and nonagricultural production sectors. Most countries call settlements with 2,500–25,000 people urban areas. The definition varies from country to country and has changed over time … A city has a certain legal status (granted by the national or provincial government) that is generally associated with specific administrative or local government structures.[6]

The important factor here is that the urban environment consists of the area's physical features, its population and the infrastructure that links the two together. The US *Doctrine for Joint Urban Operations* accordingly defines urban areas as sharing:

three main characteristics, an urban triad, that are generally so intertwined as to be virtually inseparable.

- A complex manmade physical terrain is superimposed on existing natural terrain and consists of structures and facilities of various types.
- A population of significant size and density inhabits, works in, and uses the manmade and natural terrain.
- An infrastructure upon which the area depends may also occupy manmade terrain and provides human services and cultural and political structure for the urban area and often beyond, perhaps for the entire nation.[7]

Cities deserve special attention

Cities are militarily challenging – but so are jungles, mountains, deserts, woodland and Arctic regions. Each of these natural environments requires special doctrine, special training and specially adapted arms and equipment. We therefore need to ask whether urban operations are a distinct or unique type of action, or whether they are special because cities have a critical effect on the operations taking place within them.

Many professional soldiers believe that urban operations do not deserve special attention, arguing that although they require specialised training they represent a subclass of tactics. During the post-colonial and Cold War period urban operations were regarded as a minor class of operations and, some would argue, are no more special now. They include a wide range of activities, from humanitarian relief to war, but most of the tactics and procedures used are the same as in any other operation; command and control requires the same preparation, as do rules of engagement (ROE).[8] Applying generic concepts and doctrine (such as the manoeuvrist approach) and broad operational options should, according to this understanding, be sufficient.[9]

It is generally agreed, however, that many aspects of operating in cities are unique. Close (or dismounted) combat is invariably attritional, and the movement of friendly forces between buildings is the major source of casualties. Logistics takes on special importance because the consumption of food, water and ammunition is typically higher, while supply is especially difficult. Yet many

would still argue that cities do not require their own category of operations because the emphasis is on the role performed, rather than the environment, especially in low-level operations such as peacekeeping. Even in mid-intensity operations, which may require more specialised forces, a unique set of theory or guidance is rarely required. This approach is not unreasonable. Today's uncertainties and shortages mean that a premium is placed on developing a resilient and flexible force structure capable of dealing with the unexpected. In British forces this is reinforced by generalist traditions. Even in Northern Ireland the emphasis was on the counterterrorist role, rather than the environment in which it occurs. It is true that the British Army prided itself on its street skills in Belfast, but this reflected its culture of professionalism rather than specialised training; expert soldiering covering most eventualities was the key. But the major danger of this approach is that it dismisses the single most important feature of urban operations, which is that they are urban. Cities represent a human environment that interacts with armies in a way that jungle and forests do not, and urban operations are special because their environment explicitly shapes them.

It is possible that we shall not need to operationalise this fact fully for some years. Despite episodes of intense street fighting in Iraqi cities such as Umm Qasr, Basra, Karbala and Baghdad during 2003's Operation Iraqi Freedom, the chances of frequent, sustained and large-scale urban combat in the near future seem remote. The widely feared nightmare scenario of sustained and wide-scale urban warfare in Baghdad did not materialise.[10] Indeed, some analysts believe that the coalition's military success suggests it is no longer necessary to fight urban warfare on traditional terms.[11] It is possible discretionary operations will continue for some years, or that the use of proxies, or even private military forces, will make most urban operations relatively straightforward for Western forces. Yet this seems wishful thinking. Judging from demographic and geo-political trends, the probability of engaging in frequent, sustained non-warfighting operations in cities is high, even if warfighting is not – and insurgency-like operations are by far the most politically challenging of urban operations. Political instability often occurs most dangerously in cities, which remain important prizes. And wars are still fought for territory, power, hatred and greed.

Historical experience suggests that sooner or later critical operations will take place in cities.

Urban operations are distinctive

Of all the environments in which the military operate, the urban environment is the most complex and challenging, as cities influence the conduct of the operations taking place within them to a greater extent than any other type of terrain. There are many reasons for this, of which four are fundamental:

1. physical terrain,
2. the intellectual and professional limitations of approaches designed for open areas,
3. the presence of non-combatants, and
4. the pre-modern nature of urban fighting.

(1) The physical characteristics and constraints of cities are special. Cities represent a complex multidimensional blend of horizontal, vertical, interior and external forms, superimposed on natural relief. Ground manoeuvre becomes multidimensional. The key to Chechen resistance operations in Grozny in 1999, for example, was a network of underground passages that survived heavy bombing and artillery attacks; as a result, Russian forces were never able to seal the city. Structural density requires precise small-unit location capabilities within a three-dimensional puzzle. Such terrain provides cover, concealment and sustainment but it also limits observation distances, engagement ranges, weapons effectiveness and mobility. Electronic interference and interrupted lines of sight typically reduce the value of overhead sensing systems and global positioning systems, complicating communications and targeting. Concrete contributes to spalding, ricochets and fragment wounds. Industrial hazards abound and the inflammable nature of building materials, combined with the widespread use of propane or natural gas, creates a fire risk. Poor or non-existent sanitation often threatens public health.

(2) Urban operations emphasise the intellectual and operational limitations of current military thought, decision making and logistics, all of which are designed for (and work best in) open area operations.[12] They are also understood in the light of the most recent operations. As a result doctrinal and organisational

vulnerabilities remain even as plans and technologies are re-examined, internal resource battles are fought and relevant lessons are listed.

The controversy and special pleading surrounding the type of forces needed to deal with urban operations are indicative of such vulnerabilities. The debate surrounding the 'transformation' of US forces during the Afghanistan and Iraq wars makes it evident that today's forces represent the legacy of previous decades, balanced by contemporary political concerns. Transformation's advocates (who include Defense Secretary Donald Rumsfeld) argue in favour of lighter land forces equipped with better technology and new military doctrines, together with innovative plans for greater reliance on Special Forces and precision-guided munitions. This makes sense in cities, which are generally thought to require agile forces, backed up by armour, close air support and good intelligence. On the other hand, urban operations are notoriously manpower intensive. Further, most of today's units have general utility, and few armies have developed a cadre of specialists capable of operating effectively in cities without a preliminary period of training. Few units designed for general utility receive appropriate urban-enabling capabilities such as intelligence, surveillance, target acquisition and reconnaissance (ISR), artillery, engineers and Special Forces.[13] Permanently structured urban units with specialist equipment and training are rare, even though the development of combined arms is thought essential. (Combined-arms groupings represent elements of combat and combat support arms. They depend on the environment, mission, and the threat faced, and are organised to undertake specific tasks at all levels of command.)

Armoured infantry has yet to be grouped at lower levels, providing direct-fire support rather than manoeuvre. Dealing with collapsing buildings and broken gas mains requires specialist advice, so engineers working in sewers, utility tunnels and industrial premises will have to operate in a dismounted or light role (that is, on foot and potentially in direct fire contact with the enemy) more often than might have been the case in rural environments. Normal vehicles and handling equipment will be too big for most city streets, so logistics will need to rely on manpower or small mechanical means. Other capabilities designed for open manoeuvre, such as specialist engineering and obstacle

crossing, will need to be adapted; logistical support will have to deal with different relative consumption rates, and medical units will treat different mixes of casualty types. A single platoon could require an armour-protected vehicle carrying many days' supply of normal ammunition and a company-sized medical-aid post. It could also require observer teams and direct fire assets. Combat support requirements for human intelligence (essential for establishing adequate levels of force protection) will be much higher than in equivalent rural areas.[14] Operational level changes will be necessary too.

The military success of coalition operations during Operation Iraqi Freedom suggests that addressing such issues will not be a priority. The USA used the precepts of manoeuvre warfare to draw the Republican Guard forward from static defences in Baghdad, engaging it outside the city. This meant that Baghdad could not be effectively defended. It offered opportunities for coalition air and land forces to fight together in joint warfare under favourable conditions, thus supporting – and reinforcing – contemporary orthodoxy. US forces then divided Baghdad by using key routes and the seizure of key buildings. That this was militarily effective is undeniable; modern ISR assets helped overcome the Iraqis' superior knowledge of Baghdad, and armoured patrols, supported by helicopter and air support, lessened the need to fight from house-to-house.[15] Yet success could represent a vulnerability. In Iraq, as in so many other urban wars, successful warfighting did not translate into political success; not only was the summer of 2003 marked by mounting international concern over the longer-term prospects of coalition operations, but the US-led occupation soon faced a guerrilla-style campaign. At best the strategies and tactics used against Baghdad may not transfer to other cities in other regions.

(3) Cities are rarely empty, so securing a city means operating among or controlling its population, which cannot be compared to open operations and is notoriously difficult. Historically, civilian casualties are high in urban war, as is the incidence of brutality, though this feature does not in itself challenge liberal values. It is part of a wider picture of contemporary warfare in which civilians – in urban and rural areas – are the targets of military campaigns. Washington and London may emphasise the care taken in their targeting processes, so as 'to minimise incidental

civilian harm', and they may insist that their target in Iraq was the Ba'ath 'regime's military capability, not the Iraqi people', but it is civilians who suffer most from the destruction inherent in warfighting.[16] Indeed, it is arguable that a tolerance of civilian casualties characterises contemporary liberalism. Western militaries may be more vulnerable to public criticism during operations than are irregular forces or troops belonging to repressive regimes, but sustained public concern over rising civilian casualty figures is rare. Further, short-term tactical advantage usually lies with the side having least regard for casualties; Iraqi suicide bombers were prepared to die in order to kill US troops manning checkpoints outside Najaf, and Americans were prepared to shoot innocent civilians in order to keep themselves safe.

Control also refers to exploiting urban infrastructure, which adds another dimension to operations. 'Urban infrastructure' has been redefined in the past ten years. It used to refer to just the physical form of a city whereas it now includes telecommunications and information technology (IT). Different kinds of infrastructure vulnerability may have different implications. Central business districts depend on modern communications networks that can be threatened by terrorism, technological system failure or disasters, whereas public health may be a more general concern. The control of infrastructure is important either because power-generation plants, water-supply systems or police stations have an operational significance not found in other operations, or because there is utility in keeping cities working. As a result, some British officers now argue that the exploitation of urban capabilities (e.g. communications) should be a requirement where manoeuvre, rather than simply force protection, is needed.

(4) Lastly, the technical challenges of urban operations are complex but they are only part of the equation. It is natural to argue that developments such as multitasking capabilities that integrate sensors, information operations and human intelligence can contribute to success, but it is too easy to rely on technology. The West's experience in the Gulf War, Kosovo, Afghanistan and Iraq is misleading because it detracts from the fact that urban war is probably the single most difficult form of warfare it can encounter, and has probably changed less than most other forms of war. It remains a brutal and exhausting matter involving significant collateral damage (that is, to personnel or property

not forming part of an authorised target) and casualties, and is the closest the West comes to pre-industrial forms of conflict. The traditional core capability of aggressive close combat – the Hunter-Killer philosophy of 'What I find, I can kill' – remains essential for successful operations.[17]

Some analysts have even argued that much of the technology employed today differs little from that employed before 1982, with weapons used during the urban fighting of the 1990s remaining much the same as in the 1970s (especially where ROE prohibited the stronger side from fielding advanced tanks and artillery), even though technological, social and political changes caused other elements to become more significant.[18] What is more, it is arguable that important elements of urban operations that Western analysts now identify as critical (intelligence, air power, surprise, technology, combined arms and joint operations) are probably no more decisive today than they were in the past. For example, advanced technology such as joint direct attack munitions (JDAMs) and sophisticated systems to disseminate intelligence about enemy movements were undoubtedly invaluable in the Iraq war, but so too was low technology. The US Marines advancing into Baghdad carried shoulder-fired weapons with thermobaric explosive warheads, but they also carried breaching toolkits of wire cutters and ladders, Kevlar gloves and mirrors to look round corners.

For such reasons the urban environment is distinctive – and it is found worldwide. Its man-made features are imposed onto natural terrain, and its nature, shape, functions, dynamics and survival are determined by it being a uniquely human environment. In addition, the close nature of cities, and the speed and scale of change associated with operating in and around a civilian population, ensures that cities have a magnifying effect on complexity, rate, scale and the range of military roles. To understand the military implications of this it is necessary to know more than the best means to clear a stairwell; it requires an understanding of cities and the realities of operating in them.

Cities are not neutral environments

The military view is that cities are to be avoided wherever possible but global trends suggest that the choice of whether to

become involved in urban areas may not be the West's to make. There are multiple military and political reasons for this.

Many of the operations Western forces undertake – humanitarian assistance, peacekeeping, non-combatant evacuation and enforcement – occur in populated areas. The port facilities and airfields the expeditionary forces need tend to be located in cities. Some cities contain strategic or operationally valuable resources such as access to a seaport or bridges, or they cover military corridors. Others occupy a geographical location that means they cannot be avoided. In 1944, for example, the Italian town of Cassino controlled the Liri valley (the key to Rome), and the Allies had little choice but to capture it if they were to take their offensive north. Other cities offer keys to the operational landscape. During Operation Overlord, Montgomery concentrated British and Canadian operations on the capture of Caen because the road network of eastern Normandy ran through the city. Controlling Caen would enable British armoured forces to fight on the more open countryside to the east. The capture of such cities is critical. In addition, as Leningrad, Stalingrad and Warsaw showed during the Second World War, many cities are not only politically symbolic but may be deliberately invested with strategic significance. Later, in the 1968 Tet offensive, the North Vietnamese held on to the citadel in Hue for 30 days against overwhelming odds because of its value as a national symbol. Comparable considerations were at work in Saigon in 1968 and 1975. Even the failure to take a city may have strategic consequences. In 1982, the Israelis had a stunning success in the Bekka valley but failed to take Beirut, merely bombarding it by air and artillery. The resulting television coverage was damning and resulted in their political defeat.

Cities are symbols of national existence and visible expressions of governments and states, and as such must sometimes be captured even when they are no more than rubble. In the Balkans during the 1990s, for example, war involved the deliberate destruction of major or historic cities such as Sarajevo and Dubrovnik. Cities are often the entrance point to an intransigent political problem. The 1994–96 Russian operations in Grozny are a case in point. President Dudayev declared Chechen independence in 1991, and soon began to develop a power base in the capital city of Grozny. In 1994, President Yeltsin ordered

Russian troops into Chechnya in an attempt to stop secession, assuming that Dudayev and his army were merely a band of disorganised rebels and bandits. Dudayev had, however, managed to transform the region from a semi-autonomous republic into a well armed state. Moscow dramatically underestimated the rebels' determination to gain independence, with the result that the rebels continued fighting in the countryside after Russian forces destroyed Grozny – where resistance continues despite further fierce battles.

Cities are also destination points for criminals and extremists, and have long been used as sanctuaries or bases by terrorists and insurgents. In the aftermath of the suicide hijackings of 11 September 2001, this means that the USA's 'War on Terrorism' may lead it and its allies to operate in or against cities in the developing world. The West's technological advantages may even encourage its adversaries to resort to prolonged lower level conflicts (such as subversion, terrorism, proxy and guerrilla operations) in cities. As a result the West may be forced into operating in cities because its adversaries choose that it should. Even if it is not, the primitive forms of resentment, greed, fear and force often displayed in cities will be at variance with post-modern forms of diplomacy and conflict prevention, thus challenging liberal norms. Further, as the events of 11 September 2001 emphasised, the West's own cities are potential targets, forcing it to reconsider defensive urban operations and the role of the military in domestic security.

Cities are never neutral environments. They can act as catalysts through which existing conflict is exacerbated or ameliorated because they introduce 'a set of characteristics – proximate ethnic neighbourhoods, territoriality, economic interdependency, symbolism, and centrality – not present to such an extent on wider geographic scales'.[19] Cities are also political organisms.[20] Not only do political elites usually live in them, but also they are often links in the global production chain and targets for foreign investment, and account for an increasing share of national income, generating 55 per cent of gross national product (GNP) even in low-income countries.[21] Cities contain production and storage facilities, seaports, airports, ground transportation hubs and financial centres. They are used by global and political capital as base points in the spatial organisation of production

and markets. Mega-cities also serve as primary contact points between the cities that direct and effectively control the international entrepreneurial system and regional or local markets on the global periphery. The current contests of globalisation, cultural diversification, liberalisation and ecological change are directly reflected in cities.

The Operational Environment

In practice no single factor dominates global trends.[22] The impact of each is case specific and the drivers are not necessarily mutually reinforcing; in some cases they work at cross-purposes while in others interaction is characteristic. Even so, there is much evidence to suggest that many future operations will take place in cities. This does not necessarily mean that the operational future can be extrapolated from today's uncertainties: the range of possible outcomes is impossible to predict with any certainty and major discontinuities cannot be predicted. The only thing known for sure is that Western operations will be conducted differently in 2025.

Urbanisation and demography

There is a consensus that the world is urbanising. It has been estimated that in 2015 the world's population will be 7.2 billion; that is, 1.1 billion more than in 2000.[23] Approximately 95 per cent of the increase will be in developing countries and almost all of it will occur in cities. In the Asia–Pacific region in 1970, for example, there were only eight cities of more than 5 million inhabitants. Today there are more than 30; Calcutta, Seoul, Jakarta and Karachi have populations of at least 10 million, Beijing has 15 million and Shanghai 20 million. The megalopolis of Tokyo indicates the potential scale involved: Tokyo has 30 million (or one-quarter of Japan's population) concentrated along a 150-km corridor that leads to Osaka–Kobe. Many other cities, especially those in the developing world, have mushroomed over the past few decades, with growth accompanied by pollution, crime, corruption and urban decay; urbanisation implies social relationships, but it also means racial tensions and inequality.[24] In some cities the

elites have taken over the centre and the poor are pushed out to the suburbs; in others the middle classes live in the suburbs and abandon the city centre to the poor. In most cases, urbanisation is inextricably linked to demographic changes.

Demographic change can affect urban operations in two main ways. First, youthful but alienated populations are linked to instability in Northern Ireland and in regions such as south Asia and the Middle East. Second, low growth rates in states such as the UK mean that the number of troops available diminishes and the reliance on technological solutions increases. Recruitment and retention problems lead to overstretch, which means inadequate time for training between assignments. Demographic change in a liberal democracy also means that defence budgets must compete against those of health and education.

Globalisation

The extent to which global interdependence affects the operational environment is difficult to judge. The term 'globalisation', for example, is imprecise and cannot be reduced to a few contradictory and uncertain processes.[25] It may be that the boundaries of the relationships to which it refers have simply become more diffuse. Yet globalisation has undoubtedly 'become a very powerful *metaphor* for the sense that a number of universal processes are at work generating increased interconnection and interdependence between states and between societies'.[26] It seems reasonable that the combination of new technology, cheap and instantaneous communication, economic control, increased trade production, and mobility that globalisation represents must affect the national and international operational environment of Western forces. One reason for this supposition is that globalisation offers enhanced business and funding opportunities to the pariah regimes, transnational terrorists and serious organised crime operating within cities.

Globalisation offers great advantages to the West's adversaries, as can be seen from the example of serious organised crime. Most criminal groups are dedicated to the pursuit of profit, rather than confronting or corrupting military forces as such, but military operations often take place in corrupt societies. Further, criminal groups have certain inherent advantages over military forces.

The opportunistic nature of crime means that they react to changed circumstances quickly and ruthlessly, deploying their capabilities where most effective. They diversify wherever profits can be made, or weaknesses in law enforcement can be exploited. The threat they represent appears greatest in relation to cyber attack against government and military computer systems, and is significant to a military intent on digitalisation, not least because criminals that have found an exploitable weakness will probably keep quiet about their success. The danger is increased because criminal gangs are already co-operating closely with national or international terrorists, and the most successful and sophisticated criminal groups are likely to exploit the operational methods associated with netwar.[27]

Two additional linkages between globalisation and military operations deserve emphasis. First, the interaction of humanitarian concerns and global communications has 'dramatised' conflict and prompted military interventions in places like Somalia, the Balkans and East Timor.[28] Second, as governments and their military forces have less control over flows of technology, migrants, arms, information and illegal transactions, non-state actors, ranging from commercial companies and clan militia to networked organisations such as al-Qaeda and individuals such as Osama bin-Laden, fill security voids, especially when those voids occur in cities. This development is most evident in what Reno calls 'shadow states', and in what Duffield calls 'war economies'.[29]

Reno's original work was based on research in Sierra Leone where the ties between foreign firms and the political elite played a dominant part in the conflict in that country, with politicians and warlords using private networks to enforce their demands and to extend their powers of patronage. But Reno's conclusions are relevant to many cities in fragile states, not least because they explain 'the relationship between corruption and politics'.[30] Shadow states present alternative forms of structure, power and profit, in which regimes draw authority from their ability to control markets and resources, rather than territory or coercive agents; 'thus weak rulers … try to rule through control over commercial syndicates'.[31] In other words, regimes no longer need formal state agencies. Instead they exploit their dependency on the foreign firms, mercenaries, creditors and aid organisations

contributing the resources sustaining them. The internet and greater mobility make this easier. Duffield's analysis of the linkages between globalisation, transborder trade, war economies and conflict limitation in the developing world also notes the increasing significance of privatised solutions to security problems. Further, he observes that the use of superior military force appears 'increasingly problematic given the globalised and networked character of current patterns of instability. Rather than ending wars, problems mutate and assume a protracted nature.'[32] Duffield concludes that, despite the importance of such developments, there is little knowledge of the political functioning and economic resourcing of war economies.

This lack of knowledge is significant, because one of the dangers globalisation or global interdependence (and the less controversial process of internationalisation) presents for the West is that it encourages it to understand urban operations in the developing world in Western terms. This is not to say that globalisation is responsible for the West's ethnocentric approach. It is rather to emphasise that the West assumes that its structures and standards apply whereas they may not. Indeed it is most likely that they will not: cities in developing regions reflect rationalities and causalities that are different to those of Europe or North America. Not only may their politics be centrifugal or shaped by religious fundamentalism but, as Reno implies, corruption may be fundamental to their working; that is, it may be disconnected from individual morality and the failure of state institutions.[33] This may mean no more than that conflict represents a business opportunity, but the failure of US operations in Mogadishu in 1993 cautions against underestimating its effects. The dangers will increase when Western objectives include regime change, reconstruction or democratisation, all of which are intended to change the character of the state or society concerned.

Multiple contingencies

Contingencies are potentially more important shaping factors than globalisation. As British Prime Minister Harold Macmillan was reported to have replied when asked what complicated his premiership during the 1950s: 'Events, dear boy, events.' Events should not be underestimated. The US intelligence community

did not expect the stock market collapse of 2000, let alone the Kosovo crisis, India's nuclear test or, it appears, the suicide hijackings of 11 September 2001 and, by extension, the expanded role of terrorism. In the aftermath of September 2001, liberal democracies are more inclined to wage war on terrorists in cities.

Contingencies prompt operations and shape responses, yet their ability to fundamentally change the nature of urban operations is questionable, and the extent to which the analysis of contemporary urban operations should be understood primarily in relation to the post-11 September debate remains controversial. The impact of 11 September on US policy and strategic goals is clear – terrorism and proliferation threats have been merged, and unconventional or asymmetric challenges to US primacy are certain to continue, as are attempts to force the USA to conduct operations in cities. But it is too soon to identify firm trends in operations. Operations remain a matter of choice – Seoul has been avoided so far – and there is no evidence of a fundamental or radical shift in doctrine or tactics. In reality, the post-11 September debates are complex, acrimonious and highly political. Multiple issues (terrorism, weapons of mass destruction, human rights and so forth) are woven into the rhetoric justifying coalition operations in and against cities such as Kandahar or Baghdad, and bitter controversy surrounds US operations. It is true that the difficulty of identifying potential future opponents and forecasting their methods emphasises the need for resilient and flexible force structures, but none of this is new. Many recent operations have, with the exception of the Gulf War of 1991, included a strong urban element, and the need for agile combined forces has long been recognised. Similar considerations apply to the notion of asymmetric warfare. Before the Iraq war, conventional urban operations on the model of Panama, Somalia or Haiti had slipped down the US agenda, but it is arguable that the focus on asymmetric threats merely represents a variation on the consistently strong urban theme of many recent operations. The use of irregular forces to wage urban war is not evidence of asymmetry as such, since many conventional forces (notably North Korea) incorporate irregulars within their strategies. Understood in this sense asymmetry reinforces the conventional wisdom that urban operations are significant primarily because of the environment in which they take place. It also reinforces the impression that

contingencies dictate when, where and – to a lesser extent – how operations will be conducted.

In the post-11 September world a number of points are clear:

- Advances in defence-related technology such as precision weapons and information systems cannot alone ensure military or political success.
- Targeting is as important as scale, and conventional attacks can have disproportionate effects if targeted, as the 11 September attack was, against a state's centre of gravity.
- The capacity to make real war has moved down to small groups, proving that an attack of mass effect does not need to use conventional weapons of mass destruction.
- Although the suicide hijackings of 11 September 2001 resulted in approximately 3,000 casualties and the biggest international anti-terrorist operation the world has seen, the West does not know how best to defend against or respond to urban operations (i.e. catastrophic terrorism) in its cities.
- The al-Qaeda operation was seemingly mounted from urban areas in Europe and the USA – cities provide more cover and better command-and-control opportunities than do caves in central Asia.

This last point links into the more established concerns of territoriality and military operations. In the past, war usually involved hierarchically structured forces and territorially based authorities, but the activities of al-Qaeda have introduced a new twist. Al-Qaeda is a networked organisation of small dispersed units, yet it acquired many of the trappings of conventional authority, including access to official travel documents. It is therefore questionable whether losing its Afghan base undermined its success. It may be that advances in communications and encryption lessen or remove the need for a territorial base; al-Qaeda or its successor may be able to maintain its capabilities and continue operations without having a territorial refuge.[34] It may be that it does not need a refuge in Afghanistan when Western cities can provide it. This could mean that urban operations become even more complex and difficult to avoid.

These trends imply a security environment that cannot be addressed by a single operational model. Two linked reasons suggest why this is so. First, cities often require a spectrum of

operations – offensive, defensive, stability and support – executed sequentially or simultaneously during a single operation. A globalised world will accentuate this need. Liberal democracies are dependent on global markets and networks, and need to balance humanitarian, political, economic and military objectives. This means that urban operations must fulfil a number of potentially conflicting objectives. Second, strategically successful operations reflect that power in a global information age is distributed among actors in a pattern that resembles a three-dimensional chess game.[35] This complicates easy talk of coalition warfare. On the top board military power is largely unipolar, with the USA the only country with the large, state-of-the-art forces and weaponry capable of global deployment. But on the middle board economic power is multipolar, with the USA, Europe and Japan (and, potentially, China) representing two-thirds of world production. The bottom chessboard is the realm of the transnational relations that cross borders outside government control. This includes bankers electronically transferring sums larger than many national budgets and terrorists transferring weapons. Power at this level is widely dispersed and is many sided. Indeed, the potential ability of non-state actors such as bin-Laden to issue strategic threats suggests many future operations will be multifaceted. More speculatively, the relative importance of the levels could change if the application of military force evolves to emphasise economic factors at the expense of direct military intervention. Europe's current agenda, for example, is based on economic factors such as trade and investment links with the USA, south-east Asia and Latin America. Diplomatic contacts and non-military aid play a part too, and European leaders may respond to future overseas crises through the UN or in ad hoc coalitions, or (as seems most likely) they may not choose to make strong or consistent overseas military commitments. In such cases the vertical connections may become as important as those on the levels.

Future Conflict

The preceding factors indicate ways in which the environment of future operations is being shaped. Three major trends emerge with reasonable certainty:

First, conventional wars have declined in numbers but the incidence of localised or civil wars has increased. The potential for interstate war remains strong while intrastate war seems probable, but the two are not exclusive. Intrastate wars are characteristically vicious and long lasting, and can easily spill into interstate conflicts. Irregular forms of warfare may be systematically incorporated into conventional wars. There is no reason why such conflicts should avoid cities.

Second, states continue to dominate the security environment. Despite predictions of their imminent demise it is probable that they will continue to dominate the world stage in the coming decades, adapting to globalisation and urbanisation just as they adapted to earlier religious and monetary challenges. Globalisation is, as a result, more likely to alter the scope of state – and city – authority rather than to generate new forms of political or military organisation.[36] In most cases cities will retain their importance, symbolic value and potential as sites for military operations. Indeed, cities such as Mogadishu and Kabul retain their significance even when the states they represent are an illusion.[37] Such states survive because their sovereignty does not depend on their credibility as authoritative or capable political organisations; the international community instead guarantees it. Cities, meanwhile, appear remarkably resilient regardless of decaying infrastructure, social and environmental degradation, corruption, crime and war.

Third, sooner or later Western militaries engage in intensive operations in cities and rediscover that there is very little that is fundamentally new about urban war. This is most relevant at the tactical level, but the levels of war are tightly linked and tactical actions may have strategic consequences. It is true that many of the strategic constraints shaping contemporary operations are unprecedented, but they are, nonetheless, linked to long-standing problems. Thus the terminology of asymmetric threats and minimal force may be recent, but the challenges of gaining intelligence in a densely populated city or distinguishing between combatants and non-combatants are the same today as they were to French paratroopers in Algiers in 1957. Finding the enemy is always complicated by the fact that communications in cities are difficult, and often results in frustration and the use of excessive force. Other long-standing problems include those associated

with situational awareness, without which a commander has insufficient information to manoeuvre safely. This is always made difficult by the proximity of buildings. Even if appropriate technology is developed to resolve this, troops will remain vulnerable because streets channel movement. And cities are great equalisers. As a last resort, infantrymen will still be needed to close with a highly motivated adversary who will probably be fighting on familiar ground. And increasing ruthlessness and casualties invariably mark persistent operations at every level of conflict. The comments of Israeli reservists on Palestinian fighters in the refugee camp of Jenin on the West Bank in 2002 make this explicit: 'those guys knew they were not going to get out alive and wanted to take as many Israelis as possible with them'.[38] Several days into the operation one reservist noted that his orders were 'to blast away at anything that moved, irrespective of whether troops were taking any return fire'.

Expanding Understanding

Urban operations have changed less over the past decades than the West would wish, as has its understanding of them; most operations are still defined and analysed in terms of tactics, and the post-11 September 2001 debates have had less effect than is sometimes thought, especially outside the USA. To some extent this is understandable. Tactics provide the key to the critical issue of how to ensure military success, which is usually defined as the result of mission accomplishment, reasonable friendly force casualties, and tolerable non-combatant casualties. And revision is not a priority. Ground forces did not go into Kosovo, there has been no sustained urban fighting by Western forces in Afghanistan, and US strategy achieved military success in Baghdad. Even so, military operations shaped by the promotion of liberal values associated with democratisation, human rights or specific cultural values (as opposed to state survival) require a wider understanding of cities than this approach permits. Many of the West's adversaries explicitly reject the norms and values of liberal democracies. Professional concerns, such as the synchronisation of systems and effects within a commander's battlespace, are necessary but so too is understanding of the

implications of destroying a city only to reconstruct it later. Similarly, exploitative or coercive operations in an interlinked world may need to reassess the relevance of regional hub cities, edge cities or sprawling suburbias, or the impact of crime and decay. For cities are not distinct entities as such; they consist of physical features, population and the infrastructure that links the two, and change in one or more component can cause ripple effects. In other words, urban operations should not be automatically defined as a technical matter. Success in today's typically discretionary operations demands greater intellectual flexibility and cultural awareness than in the past, especially when cities in the developing world are involved.

Few measurements are available on the physical characteristics of such cities but these are, in many respects, the least controversial aspect of the topic. Most major cities have certain European characteristics, such as combination street patterns, high-rise buildings of reinforced concrete and a framed construction in a city core, residential suburbs, distinct economic, social and ethnic sectors and so forth.[39] Many have shanty towns of one-roomed shacks without running water, sanitation or electricity, but these are of military significance primarily because of potential public health hazards, or because it is difficult to gather intelligence from their inhabitants. In practice much depends on the type of operation concerned and whether such areas can be skirted. Thus in 2003, US forces swept through the south-west suburbs of Baghdad but were able to avoid the areas of the city that resembled Kinshasa, Congo's capital, 'complete with lakes of sewage, piles of trash, beggars and straggling flea markets'.[40] Even so, the building materials involved in a city's construction may make a major difference: Mogadishu's buildings were made of stucco, cinder block and poured concrete construction and would have caught fire if conventional methods of room clearing had been used. But these are relatively minor matters, and major cities in developed and developing countries differ more in degree and style than in structure or function. Of greater significance is the fact that each urban area has its own distinctive geographical, political, military, diplomatic, economic, demographic and cultural characteristics, the significance of which depends on case specifics and the type of operation being undertaken.[41] To say that urban operations must be understood in relation to their

environment sounds overly basic yet many of the problems confronting both US forces in Mogadishu in 1993 and the Russians in Grozny in 1994–95 resulted from just this fact – regional differences matter. Operations in regions such as sub-Saharan Africa may be quite different from those in central or south Asia. Take, for example, fighting in Brazzaville in the Republic of Congo during 1997.[42] More than 62 per cent of the Congo's 3 million population live in cities; but roads are scarce and city infrastructure is at best fragile. Fighting was confined to the capital and its surrounding suburbs, where (since regular army units were rare) the war could more accurately be described as 'conventional mob warfare'. Undisciplined fighters and looting were typical. Major weapon systems such as tanks, helicopter gunships and fighters were sometimes used but rocket-propelled grenades (RPGs), mortars and artillery dominated.

References to Baghdad, Mogadishu, Grozny and Brazzaville suggest the need for an expanded understanding of urban operations. They emphasise that tactical concerns are fundamental but can never ensure strategic or operational success. One way to expand understanding is to place urban operations within their analytical context, to synthesise what would otherwise be divergent research – military history, security studies, development studies, disaster studies – into a single narrative. This cannot replace military doctrine but it can complement it by providing an enhanced strategic or operational awareness. It can help ensure that the urban operations hypothesis – paradigm is as yet too strong a word – is sufficiently robust to guide the West's efforts in the long term.[43]

Key Assumptions

The imagery of urban war has proved extraordinarily powerful in the historiography of modern conflict. Only a few full-scale battles have been fought in cities yet images of the destruction of Stalingrad and Berlin remain potent, as do photographs of burning villages in the Balkans, gutted buildings in Grozny, and mutilated children in Iraq. The reason is that urban operations represent an archetype of war, and the deliberate destruction of the man-made world. Attritional close combat is a strong

possibility in urban war, ensuring that operations remain pre-modern regardless of technological developments. Tactics remain consistent across a range of operations too because of the characteristics of the physical environment – and almost all records of operations are written emphasising tactics. Whether this makes urban operations unique or not is of less importance than that many future operations will probably take place in cities, an environment that magnifies and intensifies all military challenges.

The West is only partially equipped to deal with this. For while the nature of urban war remains fundamentally unchanged, a decade of discretionary and peacekeeping operations has been accompanied by a shift in Western political and normative values. There is, however, little consensus as to what this means for urban operations. Tension between the realities of operations, public expectations regarding minimal casualties, and the expansion of the Western security paradigm (discussed in more detail in Chapter 7) is one result. That between liberal norms and recent technological developments is, as Chapter 9 shows, another. That standards for judging legitimate levels of force under combat conditions do not exist is yet another.[44] This situation is made more indeterminate by the success of coalition operations in Iraq, which suggests that urban land warfare does not need to be fought on traditional terms.[45] All such challenges reinforce the need for a more comprehensive and coherent approach to operations in an urbanising world. And they suggest that the Western security community needs to specifically consider strategies rather than tactics if it is to develop a coherent (as opposed to reactive) approach to dealing with cities; that it needs to learn how to manage cities, either in the interests of operational efficiency or because reconstruction will begin as soon as conflict stops. For while focusing on the tactical elements of operations remains important it is only part of the story. We now need to identify the critical issues and resolve the fundamental dilemmas, relating them to probable types of operation and key emergent issues.

The fundamental assumptions underpinning this approach include:

- Urbanisation will provide a critical interactive context for many future operations.

- Urban operations are special because the urban environment has a critical effect on all military operations taking place within it.
- Each war is unique but the fundamental characteristics of urban operations remain remarkably consistent.
- Urban war represents an archetypal operation, and warfighting capabilities probably underpin all effective operations.[46]
- The principles of war and historical experience remain valid, but success at urban fighting usually requires imaginative improvisation, particularly when involving non-Western adversaries.
- Urban operations should not be considered as a narrow technical or tactical process. Focusing on terrain leads to the belief that operations in, say, Mogadishu must be more straightforward than those in a city like Belfast whereas this is not necessarily the case.
- Strategic- and operational-level issues are critical. The crucial question of how to ensure military success is a management issue in an age of proxies, multinational forces, peacekeeping and low-level conflict.

These assumptions give urban operations the potential to become a critical security issue in the twenty-first century.

Structure of Analysis

While the West has extensive experience of the tactical challenges of urban operations, the topic remains intellectually immature. How should it be conceptualised and theorised? A base for understanding is developed in this first section of the book, Rationalities, which refers to how the West deals with the problems of urban operations, both in terms of historical reality and what is happening today. It analyses how Western militaries think about urban operations and identifies issues shaping the contemporary Western way of war. In Chapter 2 the development of doctrine – the formal expression of military orthodoxy – is discussed in relation to US and British forces. The critical issues influencing contemporary urban operations are addressed in Chapter 3. Technology, the use of air power and the constraints

of multinational operations are used to illustrate the evolutionary nature of operations.

The second section of the book, Wasteland, addresses the destructiveness of urban operations. It examines three ideal types of operations as a means of identifying the evolving nature of the mission against the proven characteristics and physical constraints of operations. Categorisation always runs the risk of oversimplification, but dividing operations into analytically useful categories (reflecting typical operations) allows for a more focused debate. Chapter 4 accordingly discusses policing in cities such as Belfast, Pristina and Algiers; Chapter 5 discusses enforcement in Mogadishu; and Chapter 6 considers combat in Grozny. These three chapters emphasise the enduring characteristics of urban operations and reinforce the historical lessons, that training and experience are of greater significance than doctrine or technology.

The validity of the latter is confirmed in the final section, Reconstruction, which considers the ways in which operations have or could change. It accepts that a major change of emphasis is evident, but refutes explanations promoting new approaches to conflict derived from the merging of security and development. The implications of 'new war' and humanitarian notions are addressed in Chapter 7. The resulting emphasis on non-combatants is discussed in more detail in Chapter 8, linking into Western operations' concern for control rather than destruction. Chapter 9, however, argues that far from resolving a basic dilemma of urban operations this change contributes to the fundamental tension underpinning contemporary operations. For urban operations exemplify the tensions between the reality of military force and liberal democratic values. Together these two themes – of pre-modern conflict and new challenges – suggest a richness about urban operations that makes them an archetype of contemporary conflict. There is no urban paradigm that can be applied to military operations but, based on this discussion, Chapter 10 identifies an explanation of why urban environments consistently affect military operations in the way they do.

Notes

1. NATO systematically ignored urban areas. See L. Dzirkals, K. Kellen and H. Mendershausen, *Military Operations in Built-Up Areas: Essays on Some Past, Present, and Future Aspects* (Santa Monica, CA: RAND, 1976). According to the authors, the marked aversion 'reflects a widespread distaste for the concrete issues of how to render an actual attack on Western Europe unpromising and how to defeat it'. Ibid., p. 53. Compare P. Bracken, 'Urban Sprawl and NATO Defence', *Survival*, 18, 6 (1976), pp. 254–60; C. Donnelly, 'Soviet Techniques for Combat in Built-up Areas', *Military Review*, 57, 11 (1977), pp. 37–48. For post-colonial operations see the 1991 editions of *Combat & Survival*, which contain participant accounts from operations such as Jerusalem (1946), Palestine (1948), Zanzibar (1961) and Mauritius (1968).
2. A brief summary of 22 urban battles, from Stalingrad (1942) to Tyre (1982), from which dominant trends can be extracted is found in US Marine Corps, 'Modern Urban Battles: Excerpt Summary from the *MAWTS-1 ACE MOUT Manual*' (www.urbanoperations.com /modernbattles.htm). Military casualties are given when known. Conventional wisdom holds that urban war, which favours defence, magnifies the usual 3:1 ratio needed to overcome dug-in defence in open country with armour to more than 5:1. O'Sullivan argues that the proposition is unproved, suggesting instead that the accessibility of most modern cities makes them easy to take but hard to hold. See P. O'Sullivan, *Terrain and Tactics* (London: Greenwood Press, 1991).
3. Military activities are conducted at different levels involving different people. The British model is based on the levels identified by NATO's command and analysis framework: (1) the grand strategic level co-ordinates military, economic and diplomatic power; (2) military strategy is the military component of grand strategy; (3) the operational level is the level at which wars are planned, and military forces used to achieve strategic goals; and (4) the tactical level involves the direction of military resources to achieve operational objectives. See Joint Warfare Publication (JWP) 0–01, *British Defence Doctrine*, 2nd edn (Shrivenham: JDCC, 2001), pp. 1–2, 1–3. Compare Joint Publication (JP) 1–02, *Department of Defense Dictionary of Military and Associated Terms* (1994, amended 2000) (www.dtic.mil/doctrine/jel).
4. 'Urban operations' is the preferred term. In British terminology 'operation' refers to the military actions involved in fulfilling a military mission; it means the process of carrying out the activities needed to gain the objectives of a battle or campaign. 'Mission' is a statement of the task of a commander. 'Campaign' is the sequence of operations designed to achieve a strategic objective. See Joint Warfare Publication (JWP) 0–01, *British Defence Doctrine*, 1st edn (London: MOD CS (M)G, 1996).

5. Joint Publication (JP) 3–06, *Doctrine for Joint Urban Operations* (Washington, DC: 2002), p. 1-1. This definition is essentially that used by the US Marine Corps, the lead US agency for urban operations. See also US Marine Corps Reference Publication (MCRP) 5–12A, *Operational Terms and Graphics*.
6. World Bank, *World Development Report 1999/2000* (New York: World Bank 1999), p. 127. The categorisation of cities varies. Many threshold figures have no theoretical base but 'mega-cities' are usually cities with more than 8–10 million inhabitants. The term is often used synonymously with 'conurbation', 'megalopolis' and 'world city' though there is little agreement about what these terms mean. World city seems to have more to do with status and function than size.
7. JP 3–06, p. 1-2.
8. ROE are directions that set out the circumstances and limitations under which force may be applied to achieve military objectives. Recent British doctrine even defined operations in built-up areas (OBUA) according to their ROE. In ascending order the levels were: urban operations conforming to national ROE (as in Northern Ireland); operations conforming with coalition ROE or international consent; and fighting in built-up areas (FIBUA), where the rules are those of international law. A comparable approach is that used by the British Army Field Manual, *Urban Operations*, which defines the main range of urban operations in terms of their legal foundation: military aid to the civil power (MACP), multinational operations (NATO or coalition), and fighting in built-up areas (FIBUA). See Army Field Manual Vol. IV, *Operations in Special Environments, Part 5: Operations in Built-Up Areas (OBUA)* (1998), ch. 2; D. Barley, 'Are We Prepared for the Challenges of Future Operations in the Urban Environment', *British Army Review*, 125 (2000), p. 25.
9. The manoeuvrist philosophy of warfare represents NATO orthodoxy and is thought applicable to all types of operation. It aims to defeat an enemy by destroying his cohesion and will through a series of rapid and unexpected actions; 'constant and unacceptable pressure' is to be applied against enemy vulnerabilities. This depends primarily on 'an attitude of mind in which doing the unexpected and seeking originality is combined with a ruthless determination to succeed'; it does not preclude attrition. See Joint Warfare Publication (JWP) 0–01, *British Defence Doctrine* (2001), p. 3-5. The goal of the manoeuvrist approach to urban operations is to achieve objectives with fewer friendly casualties, less collateral damage to urban infrastructure, and reduced harm to the non-combatant population. In US terms the interrelated military activities of 'understand, shape, engage, consolidate, and transition' are the framework on which the approach is built. This is thought to enable US forces to function more effectively in the chaotic and fluid urban environment.

10. There were fears that a major urban battle would trigger North Korea to make a pre-emptive strike on Seoul.
11. See A. Cordesman, 'The "Instant Lessons" of the Iraq War: Main Report', 28 April 2003 working draft (Washington, DC: Center for Strategic and International Studies), p. 174 (www.csis.org/features/iraq).
12. The difference between open and restricted terrain is primarily a matter of cover and range. There may be open areas on the edges of cities in which deep battle in the conventional sense may be fought.
13. ISR was formerly known as ISTAR, but the formal target acquisition function is now considered a subset of the others.
14. Human intelligence is collected and provided by human sources. Contrast signals intelligence, which is taken from communications, electronics and foreign instrumentation signals.
15. See A. Cordesman, 'The "Instant Lessons" of the Iraq War', p. 27.
16. Ministry of Defence, *Operations in Iraq: First Reflections* (London: MoD, 2003), p. 14. The coalition has not estimated the number of civilians killed in Iraq, nor are reliable figures available for Iraqi military casualties. Approximately 2,000–3,000 Iraqi troops were believed killed in the attack on the Republican Guard on the outskirts of Baghdad in early April, while a British official thought that about 20,000–25,000 Iraqi soldiers died in the 'carnage' caused by coalition bombing during the war. See 'Rising civilian casualty figures cause concern', *Financial Times*, 11 April 2003.
17. Director of Infantry, *Future Infantry … the Route to 2020* (2000), p. 16. That an infantry-centric understanding is central to British understanding is not accidental; a combined arms approach is necessary but infantry capabilities remain the critical element in successful urban operations. Significantly, the US Marine Corps (USMC), the lead US agency, fulfils an essentially light infantry role.
18. The argument is that of S. Edwards, *Mars Unmasked: The Changing Face of Military Operations* (Santa Monica, CA: RAND, 2000). Compare USMC studies which conclude that the major factors impacting on the way urban warfare has been conducted include intelligence, surprise, special assault units supported by tanks, and the use of direct and indirect artillery. See 'Modern Urban Battle Analysis and Observations (Part 1): *MAWTS-1 Aviation Combat Element MOUT Manual* (www.urbanoperations.com).
19. S. Bollens, *On Narrow Ground: Urban Policy and Ethnic Conflict in Jerusalem and Belfast* (Albany, NY: State University of New York Press, 2000), p. 326. Jerusalem did not become the scene of conflict until the outbreak of the first intifada, and the Palestine Liberation Organisation (PLO) did not stress Jerusalem as a Palestinian cause until well after Israel annexed the Arab quarter there.

20. Cities and urbanisation played a role in the formation of capitalism and socialism. See G. Andrusz, M. Harloe and I. Szelenyi, *Cities after Socialism: Urban and Regional Change and Conflict in Post-socialist Society* (Oxford: Blackwell, 1996). One of the important consequences of the break-up of the Soviet system has been territorial conflict based on nationality and ethnicity.
21. Only in Africa has urbanisation not been accompanied by economic growth. Globalisation has reinforced Africa's marginalisation, impoverishment and indebtedness, rather than leading to economic growth and diversification. Case studies of the impact of globalisation and urbanisation on selected African cities (Cairo, Lagos, Johannesburg, Kinshasha, Abidjan and Nairobi) are to be found in C. Rakodi (ed.), *The Urban Challenge in Africa: Growth and Management of its Large Cities* (Tokyo: United Nations University, 1997).
22. The following material is based on the arguments presented in National Intelligence Council, *Global Trends 2015: A Dialogue about the Future with Nongovernment Experts* (2000), p. 39 (www.odci.gov/cia/publications/globaltrends2015.htm).
23. See B. Nichiporuk, *The Security Dynamics of Demographic Factors* (Washington, DC: RAND, 2000). The United Nations produces a number of relevant publications. See, for example, UN Population Division, *World Population Prospects: The 2000 Revisions* (New York: UNPD, 2000). Other UN studies include *Urban Agglomeration Chart, Challenge of Urbanization: World's Largest Cities and World Population Chart* (www.umn.org/publications). Estimates of future urbanisation are usually based on the observation that in Europe and the Americas the urban percentage of a total population has stabilised at 75–85 per cent. See 'Urbanisation: The brown revolution', *The Economist*, 11 May 2002, pp. 13–14. See also R. Fuchs, J. Chamie, F. Lo and J. Uitto (eds), *Mega-city Growth and the Future* (Tokyo: United Nations University, 1994).
24. Classical authors of urban sociology, such as Georg Simmell and Louis Wirth, caught this element of urban life by defining urbanism in terms of the density and diversity of human interaction and institutions, anonymity, the breakdown of traditional community and its replacement by 'society'. See Andrusz, Harloe and Szenyi, *Cities after Socialism*.
25. Comprehensive guides to globalisation and global governance are to be found in D. Held, A. McGrew, D. Goldblatt and J. Perraton, *Global Transformations* (Cambridge: Polity Press, 1999); J. A. Scholte, *Globalization: A Critical Introduction* (London: Macmillan, 2000). The role of cities is increasingly examined against the background of global and regional economies. The objective of the UN University Programme on mega-cities and urban development (established in 1990), for example, was to examine the social, economic and environmental consequences of the development of large metropolitan

agglomerations, especially those in the developing world. See A. Gilbert (ed.), *The Mega-city in Latin America* (Tokyo: United Nations University, 1996); F. Lo and Y. Yeung (eds), *Emerging World Cities in Pacific Asia* (Tokyo: United Nations University, 1996). The impact of war and social conflict was not addressed as such.

26. A. Hurrell quoted in M. Berdal and D. Malone, *Greed and Grievance: Economic Agendas in Civil Wars* (Boulder, CO: Lynne Rienner, 2000), p. 7.
27. See I. Lesser, B. Hoffman, J. Arquilla, D. Ronfeldt and M. Zanini, *Countering the New Terrorism* (Santa Monica, CA: RAND, 1999), p. 48.
28. J. Nye, 'Military Deglobalization?, *Foreign Policy* (January–February 2001), pp. 82–3.
29. See W. Reno, 'Shadow States and the Political Economy of Civil Wars', in Berdal and Malone, *Greed and Grievance*, pp. 43–68; M. Duffield, 'Globalization, Transborder Trade, and War Economies', in Berdal and Malone, *Greed and Grievance*, pp. 69–91. See also W. Reno, *Corruption and State Politics in Sierra Leone* (Cambridge: Cambridge University Press, 1995).
30. Reno, 'Shadow States', p. 45.
31. Reno, *Corruption*, p. 19.
32. Duffield, 'Globalization', p. 90.
33. For contrasting views of such issues see P. Chabal and J.-P. Daloz, *Africa Works: Disorder as Political Instrument* (Oxford: James Currey and Indiana University Press, 1999); J.-F. Bayart, S. Ellis and B. Hibou, *The Criminalization of the State in Africa* (Oxford: James Currey and Indiana University Press, 1999). The subject is invariably considered in relation to the developing world. Compare Berdal and Malone, *Greed and Grievance*; J. Cilliers and P. Mason (eds), *Peace, Profit or Plunder? The Privatisation of Security in War-torn African Societies* (SA: ISS, 1999).
34. The question is asked by S. Simon and D. Benjamin, 'The Terror', *Survival*, 43, 4 (2001), p. 11.
35. The analogy is that of J. Nye, 'The new Rome meets the new barbarians', *The Economist*, 23 March, 2003, pp. 23–5.
36. Krasner argues for the sovereign state's adaptivness. See S. Krasner, 'Sovereignty', *Foreign Affairs* (January–February 2001), pp. 20–9. For a review of earlier statist literature see Krasner's 'Approaches to the State: Alternative Conceptions and Historical Dynamics', *Comparative Politics*, 16, 2 (1984), pp. 223–46; H. Lentner, 'The Concept of the State: A Response to Stephen Krasner', *Comparative Politics*, 16, 3 (1984), pp. 367–77.
37. The memorable phrase is that of R. Jackson, 'Juridical Statehood in Sub-Saharan Africa', *Journal of International Affairs*, 46, 1 (1992), p. 1.
38. P. Jacobson, 'Jenin: massacre or madness?', *Sunday Times Magazine*, 23 June 2002, pp. 36–43. This part of the Israeli Defence Force

(IDF) operation was, however, prompted by the deaths of 23 Israeli soldiers, including 13 killed by an elaborate ambush involving a suicide bomber, a booby-trapped house and gunfire.

39. O'Sullivan, *Terrain and Tactics*, pp. 147–8. Compare J. Gugler (ed.), *The Urbanisation of the Third World* (Oxford: OUP, 1988).
40. 'Waiting, with bravado and anxiety', *The Economist*, 19 October 2002, p. 63.
41. The central location of the upper class restrained US Air Force assistance to the Aquino government fighting the insurgents that seized Manila in 1989. Similar concerns gave rebels in San Salvador an advantage; government forces were reluctant to use artillery or airpower to dislodge them from downtown. See E. Trainor, 'El-Salvador: The Battle for the Cities', *Marine Corps Gazette* (1990), pp. 8–11.
42. A. Geibel, 'Brazzaville – The Congo: Dying Cities in an Unknown Civil War', *Infantry* (September–December 1998), pp. 17–20.
43. 'Long term' is understood here as meaning 10–25 years in the future. 'Short term' is 1–5 years and 'medium term' is 5–10 years.
44. A. Cordesman makes the point forcefully in 'The Second Intifada and the Lessons of Jenin: Dealing with the Grim Realities of Urban Warfare' (Washington, DC: Center for Strategic and International Studies, 2002).
45. Cordesman, 'The "Instant Lessons" of the Iraq War', p. 27.
46. This premise supports the British approach to urban operations (including peace-support and post-conflict activities), but is not necessarily shared by other forces. Nevertheless, warfighting remains the defining capability for most professional armies even though political, social, economic and other considerations shape operations.

2 Thinking about Urban Operations

There are no reliable or coherent theories of urban operations. Warfighting usually receives specific guidance, but most low-level operations are subsumed under peacekeeping or counterinsurgency (COIN), while medium-level operations are integrated into enforcement or its equivalent. Most NATO forces rely for general guidance on the manoeuvrist approach, which aims to defeat an enemy by destroying his cohesion and will, even though its applicability to operations involving intelligent non-state non-Western adversaries has yet to receive rigorous critical evaluation. A simple example is suggestive of the need to revisit the topic. NATO orthodoxy holds that 'a key characteristic of the manoeuvrist approach is the attacking of the enemy commander's decision making process by attempting to get inside his decision making cycle'.[1] This is achieved by using tempo (that is, the rate or rhythm of military action relative to an enemy) to seize the initiative. High tempo is undoubtedly critical; it is achieved through mutual trust and remains the defining capability for professional forces during combat. But although the tempo of low-level operations in a city such as Belfast during the 1970s was fast, one of the lessons of the Second World War was that the tempo of urban combat is often slow and tortuous. Manoeuvrism's relevance to covert or clandestine war waged against non-state groups, such as religious cults or drug cartels, remains unclear too. It may be difficult to achieve when opponents are not amenable to coercion

or do not share Western rationalities, or if there are multiple commanders, or if the political economy of a conflict is misunderstood. And it is unclear how a Western commander can force such an enemy 'to make decisions at a faster rate than that with which he can cope'.[2] Furthermore, an enemy may be better at exploiting such an approach – and more unscrupulous – than the West is. Western cities may yet prove to be centres of gravity and President Bush's 'War on Terrorism' could prompt the evolution of new and more complex forms of warfare for which the West is unprepared.

The broader issues of security and asymmetric conflict in urban environments now frame the West's assessment of urban operations. The objectives and methods used by US-led forces in Afghanistan in 2001 and Iraq in 2003, for example, were shaped by the post-11 September 2001 debates; American priorities and resource allocation shifted as the 'War on Terrorism' became the defining feature of George W. Bush's presidency. The psychological impact of the suicide hijackings of 11 September on the US administration resulted in an aggressive expeditionary stance that built on the notion of 'transformation', whereby developments such as unmanned vehicles and lighter agile land forces are used to dissuade the USA's adversaries from fighting in cities. What is more, transformation's advocates claim that the precision munitions, better surveillance and communications capabilities on which it is built will make urban war less costly for US forces. Traditional approaches to urban war (such as 'rubbleisation') are to be replaced by a new conceptual framework that emphasises the need for understanding the religious and ethnic populations of cities, shaping it by providing welfare for non-combatants, engaging adversaries with lethal and non-lethal means, consolidating control while restoring vital infrastructure, and transitioning out of an operation. New military doctrines are to be developed.

Yet it is arguable that neither the suicide hijackings of September 2001 nor subsequent operations have changed the way the West understands urban war, let alone transformed the way it is fought or terminated. The West does not know how best to defend against or respond to operations against its cities; al-Qaeda has not been destroyed; and the absence of sustained urban war in Baghdad owed more to the failed Iraqi response

than to US skills. The technologies used by US forces during the war in Iraq were impressive, as was the use of special operations, but there is as yet little evidence of a radical shift in US thinking about urban operations as such – witness the incoherent response to suicide bombers and looting towards the end of the military operations, and to the challenges of policing fragile urban societies in the aftermath of war. Of course many lessons were learned, and the deteriorating security situation in Iraq soon forced Washington to reassess its occupation policies (which by July were costing US$3.9 billion a month): in July, Paul Wolfowitz, the deputy US defence secretary, admitted that the Pentagon had underestimated the difficulty of stabilising Iraq; and in August, Washington acknowledged its need for both multinational assistance and UN approval of its plans. But pragmatism and a shift in foreign policy does not amount to a fundamental reassessment of urban operations. Indeed, the very success of the USA's warfighting is likely to confirm the utility of the approach adopted in Baghdad at the same time as other levels of policy and tactics are rebalanced in order to ensure a more effective approach to transitional operations (which are invariably treated as of secondary importance). The real significance of events since 11 September is that they represent an extension of trends in the security environment already visible.[3] These include:

- the empowerment of cross-border non-state actors operating in interdependent and vulnerable post-industrial urban societies;
- multiple failed and dysfunctional states;
- the USA's unilateralist drift;
- NATO's decline;
- the transformational potential of information technology.

These trends have implications for urban operations, although in a diffuse rather than definite way. The US military operation in Afghanistan was, for instance, marked by unilateralism, which has significant implications for its traditional allies; coalitions of the willing or invited appear to represent the immediate future for those forces wishing to become involved, and multinational forces are reserved for stabilisation operations. In addition, President Bush's failure to refer to NATO in his 'Axis of Evil' speech, in which he placed Iran, Iraq and North Korea with the

forces of global terrorism, suggests that NATO's role in doctrinal development may change. In the past NATO's military working groups often provided a forum for the development of urban doctrine. Its pronouncements were frequently formulaic and ambiguous but papers such as *Study into Urban Operations in the Year 2020*, which attempted to develop a concept framework supporting missions, performed a useful consensual role.[4]

More fundamentally, operations in Afghanistan suggested that the old heavy forces must be transformed into something more versatile. Within weeks the 'War on Terrorism' prompted Defense Secretary Rumsfeld to tell NATO it must develop a 'military concept for defence against terrorism', and the British House of Commons Defence Committee to place a premium on 'specialist and highly trained agile forces' such as marine commandos and paratroopers.[5] Such demands will require significant doctrinal development – not least because not only has the West no point of reference for al-Qaeda but it has no strategic focus to guide its response to terrorism involving the successful use of conventional weapons, let alone nuclear, biological or chemical weapons. Countries such as the UK will have to decide whether they wish to be in the front line of future urban operations or fulfil a niche role. That the UK, like its allies, has no coherent strategy for urban-based threats and few novel ideas for operating in cities makes it timely to reconsider how it thinks about urban operations.

Current Western orthodoxy can be judged from military publications and journals such as the US *FM 90-10 Military Operations in Urbanised Terrain (MOUT)*, *Marine Corps Gazette* and *Military Review*. National emphases naturally vary but there is a degree of international consensus that makes such US publications reasonably representative – and US publications are by far the most informative and accessible; they are also widely monitored. The role that published articles play in the doctrinal process is debatable but publication often endorses information. Two general characteristics stand out, indicating the way in which urban operations are commonly understood. The strongly tactical focus of almost all publications is the first, while the second concerns the conformist terms in which the subject is approached. Analysts may advocate pursuing enemy forces in a radically different way, of using systemic disruption rather than cumulative destruction,

but most commentators think in strictly conventional military terms. Most discussions are couched in terms derived from European scenarios or the most recent engagement fought, and focus on topics such as the appropriate balance of forces and which tactics contribute to success. The best indication of the assumptions underlying the debates – that is, current orthodoxy – is to be found in the formal military doctrine that is the subject of this chapter.[6]

Doctrine

Definitions of doctrine vary. In British terms, doctrine is 'that which is taught'.[7] Doctrine represents the '*fundamental principles by which military forces guide their actions*'. It is not a set of rules so much as a formal framework for understanding war and the use of force: 'it influences the way in which policy and plans are developed, forces are organised and trained, and equipment is procured'. It is a means by which military strategy is translated into operational guidance. In practice British usage conforms to NATO doctrine, terms and procedures. In contrast, the USA defines doctrine more sharply. Doctrine serves

> national interests … It does so not only by providing guidance on how to conduct operational activities … but also by acting to guide technological development, the design and conduct of training, and the design of organizations. (Technological development and organizational structure can, in turn, influence doctrine.)[8]

Doctrine reflects national styles, experiences and norms. American doctrine is shaped by US power, resources and cultural values. The UK bias is moulded by its generalist traditions, small forces and preference for operating alongside the USA. Until the Iraq war neither country's forces had recent experience of sustained urban warfighting – Mogadishu, Kosovo and Afghanistan did not involve persistent, systematic or large-scale urban operations – whereas those of Russia have. But Russian forces (like those of Israel) have often been described as using military force to make up for doctrinal inadequacies. Nevertheless, a military consensus is clear: urban operations are best avoided, and technological

solutions to reduce the likelihood of close combat are desirable wherever possible. The dominant view across a range of militaries is that cities are a special environment rather than a specific mission; they are complex environments that should be addressed by adapting current capabilities as necessary. A fundamental shift to this consensus is likely only if technologically led operations by the USA prove spectacularly successful in sustained or large-scale warfighting against strong and effective enemies in cities.

Two caveats deserve note. First, all agree that doctrine is never sufficient (indeed, not all forces have it) and must be supplemented by professional skill and judgement. A classic example is provided by the Russian military, who inherited an impressive body of formal urban warfare doctrine, together with extensive experience of urban operations, from their Soviet predecessors yet still suffered humiliation at the hands of Chechen rebels. As a result, today's commanders must apply prescribed tactical methods while trying to cover the inevitable gap between doctrine and battlefield realities. They have to be alert to flaws in doctrine and tactics, determine the enemies' defensive schemes, learn new lessons and find ways to surmount unexpected challenges. They thus face similar problems to those confronting their predecessors. In 1944, for example, events in north-west Europe soon outpaced doctrine and Allied commanders had to fill the gap by using proven tactical principles and their own experience and judgement.[9]

Second, doctrinal development is far from objective. It takes time (updating manuals takes several years), is shaped by variables such as technology, geography and institutional interests, and is manipulated to control resources by the forces concerned. Culture and tradition play a part too: doctrine requires consensus so the assumptions and values that the military share are important. Indeed, one of the difficulties associated with tracing the development of doctrine is that it emerges from a complex network involving personal contacts. As a result there is often tension between current guidance, fighting the last war, and emerging challenges. This is especially noticeable in Western operations, which must accommodate liberal norms, historical experience and unconventional adversaries. This issue is best considered in relation to the USA and UK, which are used here as a means of producing a set of generalisations about the state of con-

temporary operations. They are then confirmed by reference to developments in Australia, Canada, France, Germany and (to counterbalance the Western emphasis) Singapore and China.

US and British developments

There are four reasons for the emphasis on US developments in this book. First, they represent the state of the technological art. The demand for improved urban capabilities after the Mogadishu debacle of October 1993 resulted in a series of technology initiatives, joint and single service war games, field exercises and doctrinal developments that attracted great professional attention. Second, the USA's unparalleled technological edge is linked to an ability to intervene in almost any city in the world. The size of the US military budget is the third reason. The Pentagon has an R&D budget of $53.9 billion for financial year 2003, and is spending over seven times more per soldier on next-generation technology than the whole of the European Union (EU).[10] Fourth, its allies monitor US developments because compatibility is essential for any country wanting to form part of US-led 'coalitions of the willing'.

This category undoubtedly includes the UK. But the UK also deserves attention because of its extensive experience of protracted low-level security operations and because its body of generalist corporate knowledge balances the more overtly aggressive and technologically focused US approach. British forces were forced to return to urban operations in the decades after 1945; insurgencies and terrorism in Palestine, Cyprus, Aden and Northern Ireland meant they had no choice. Tactical skills were learned – usually on the job – even if lessons were rarely documented or defined as doctrine by the Army, which took the lead in such operations.

Current US approach

The US approach to urban operations is innovative, technologically biased, aggressive and contradictory. Like most conventional forces the USA wishes to avoid combat by ground troops wherever possible but, unlike most, it consciously explores new approaches. This has led to attempts to develop an 'indirect approach' that would enable the defeat of an opponent without committing large numbers of ground forces in traditional battles. The trend is

seemingly driven by the strong US dislike of American casualties. As Coker has noted, 'whether the perception of casualty aversion is accurate or not, it seems to shape current US military planning as well as long-term force development'.[11] The traditional tactic of closing with and destroying the enemy has accordingly shifted to one in which a finding-and-fixing force holds the enemy in place long enough for precision fire to do the killing from a distance. But because the urban environment limits information, surveillance, target acquisition, and reconnaissance (ISR) capabilities, firepower continues to be used to locate and engage enemy forces. The usual result is heavy casualties and significant collateral damage, so real efforts have been made to find alternative ways of conducting operations. US forces now seek to leverage an improved understanding of cities that relies on sensors, unmanned systems and precision effects, rather than overwhelming force, yet, at the same time, a willingness to use force rather than manoeuvrist principles is evident. Force and manoeuvre are admittedly complementary rather than mutually exclusive, but US troops often appear to dismiss manoeuvrism's potential economy of force even though it promises results that are disproportionately greater than the resources applied.[12]

The result of such a multifaceted approach can be seen in the recent evolution of US doctrine. The USA has long been best known for its perceived promotion of MOUT (military operations on urbanised terrain), which essentially consists of directing firepower from armour or artillery against a restricted zone after Special Forces have defined its limits. US Marines first tested the method during the battle of Hue in 1968,[13] though the Army's primary MOUT manual, *FM 90-10 Military Operations on Urbanised Terrain (MOUT)*, was not published until 1979 and the Marines Operational Handbook 8-7 of the same name was only published in 1980. But by the mid-1990s such publications were dated, containing little on contemporary concerns, such as minimising collateral damage or joint operations. Only the Army Infantry School 1993 publication, FM 90-10-1, *An Infantryman's Guide to Combat in Built-up Areas,* with its use of 'precision' and 'surgical' MOUT, incorporated lessons learned from Panama, Somalia and Haiti. In 1995 work therefore began on nine fundamental ('capstone') doctrinal manuals, and in 1996 the Joint Chiefs of Staff issued *Joint Vision 2010* as a conceptual

framework for how the military would fight in the future; it was to serve as a common template for leveraging technological advance.[14] Even so it was not until 1998 that the Joint Staff, Army, Air Force and Marine Corps created programmes specifically designed to enhance their urban capabilities. Four notable initiatives in doctrine, experiments and exercises were developed or came to fruition at that time. In early 1998 the development of the capstone doctrinal manuals was complete; in January the Army began rewriting its FM 90-10; in April the US Marine Corps (USMC) published Marine Corps Warfighting Publication (MCWP) 3-35.3, *Military Operations on Urbanised Terrain*, and in October approval was given for the development of the innovative Joint Publication (JP) 3-06, *Doctrine for Joint Urban Operations*, which was published in 2002. Since the turn of the century, however, urban operations have seemingly been replaced as a priority by asymmetric warfare and the 'War on Terror'.

The USA views urban operations as a combined-arms and joint fight. Teams in Hue included tanks, infantry and Ontos armoured vehicles and the combined-arms and joint approach to warfare proved its worth in Baghdad, where a combination of tanks, infantry, tactical air strikes, artillery and psychological operations resulted in military success. Jointness is enhanced by the role of the USMC as the lead service for urban operations. This is unusual in that armies usually take the lead but it makes sense because US naval expeditionary forces have historically carried out urban contingency operations, executing a limited and discrete set of operations ranging from non-combatant evacuation to counterinsurgency. The USMC's role is not official but results from its conviction that future conflict will take place in or around cities on coastlines. It was the first to argue that urban operations deserved specific attention, basing this on its estimate that, by 2020, 70 per cent of the world's population will live in cities, 70 per cent of which will be located along coastlines or littorals (which it ambitiously defines as areas within 300 miles of the coast). Attempts to dramatically improve the USMC's capabilities to deal with this challenge were accelerated in the mid-1990s by the then commandant, General Charles Krulak. Krulak, who became commandant in 1995, directed that a warfighting 'laboratory' (MCWL) should serve as the focal point for innovation and the synthesis of operational concepts, tactics, techniques

and procedures with emerging technologies. Under Krulak's direction the MCWL began an ambitious five-year urban experimental process, known as Sea Dragon, dedicated to developing, field-testing and implementing future operational and functional concepts. Sea Dragon was broken down into three separate experimental phases: Hunter Warrior, Urban Warrior and Capable Warrior.[15] Hunter Warrior investigated small-unit operations on a dispersed open battlefield; Urban Warrior covered operations in urban, near-urban and close terrain and, in its initial phase, focused on improving warfighting capabilities while reducing friendly casualties and associated collateral damage; Capable Warrior concerned operations combining virtual and live forces and involved operational-level deception and manoeuvre. A number of allied nations (notably the UK but including Australia, Holland, France and Canada) were involved. Meanwhile the US Army also began to pursue the subject in earnest, and a Combined Arms Military Operations Urban Terrain Task Force at Fort Benning became responsible for developing doctrine, tactics, techniques and procedures at the operational and tactical levels.

The two forces had much in common. Indeed, they shared responsibility for managing the Department of Defense (DoD)'s Military Operations Urban Terrain Advanced Concept Technology Demonstration (MOUT ACTD) programme in which mature technology is applied to systems addressing pressing warfighting needs. But the major differences of approach between the two deserve attention because they illustrate the challenges of urban operations for conventional forces. The differences occur because each force tailors its approach to the types of missions it expects to conduct. For the USMC this means forward expeditionary operations. According to Krulak, the most significant revelation from the MCWL was that a light force arriving early could seize the initiative from a superior enemy if long-range precision weapons support it. Such a force is, he argued, capable of dominating the battlespace through the integration of fire from organic and supporting weapons. In addition, the USMC is light and comparatively unbureaucratic so adapting to a new strategic environment is a relatively practical proposition. In contrast, the Army's mandate is to win conventional wars and this makes its ability to innovate more limited.[16] Whether the USMC should

abandon amphibious war as a core capability and adapt to an expeditionary role based on urban war and air mobility so as to complement the Army role of fighting heavy forces is, however, unresolved. The relative role, size and composition of future US ground forces are fiercely contested.

Two further approaches deserve notice. Unlike most air forces, the US Air Force has been active in investigating shortcomings in the USA's ability to conduct urban operations; indeed, it took the lead in preparing the Joint Staff's interim *Handbook for Joint Urban Operations* published in 2000. It is working on a number of projects concerning improved targeting and tracking systems, overhead three-dimensional battlespace analysis, overhead counter-sniper systems, aerial delivery of non-lethal agents, and the overlay of real-time video from unmanned aerial vehicles (UAVs) onto satellite imagery. Various RAND reports indicate the approach adopted.[17] A second notable development is Project Lincolnia, which resulted from a General Accounting Office report in 2000 that was critical of DoD MOUT efforts as being too focused at the tactical level and paying insufficient attention to the operational or strategic issues. Lincolnia marks the first attempt by the DoD to create an experiment examining urban operations from a joint and inter-agency perspective across all levels of war. It aims to include political, economic, cultural and intelligence factors and civilian agencies within the urban framework. Its potential is evident though its eventual significance is uncertain.

The USA is thus in the vanguard of urban operations. Its stated objective is that new capabilities will incorporate technology so as to apply the manoeuvrist approach more effectively. The extent to which the move from attrition to manoeuvre has been successful may be contested but the vision is undeniable: US forces will 'own the city' by virtue of their superior capabilities to understand, shape and engage with precision effects, and will consolidate their gains so as to facilitate the transition to civilian authorities.[18] Three factors offset this optimistic picture. The relatively limited resources poured into urban operations over an approximately ten-year period are insufficient as yet to create a strong trend; the time scale is too short. In addition there is a military consensus that doctrine remains flawed. Recent operations in Afghanistan and Iraq also suggest that US

forces are better suited to warfighting than to policing the low-level, persistent and insidious security operations that appear increasingly likely. More topically, the 'War on Terrorism' has changed priorities: asymmetric threats have replaced urban operations on Washington's strategic agenda, and military success in Baghdad has reinforced the shift. Together these trends make the emergence of major operational concepts based on new enabling capabilities appear unlikely in the near future. So too does a radical rethink of strategies for urban operations.

UK doctrinal development

In contrast to the USA's high-profile experimental work, the British approach is comparatively low-key and pragmatic. Operations are now formally joint and doctrine is developed at the Joint Doctrine and Concepts Centre at Shrivenham, but the British Army takes the lead on urban operations, which (despite the major contribution of the Royal Marines) remains an essentially infantry issue.[19] It is the Army's traditions, style and committees that set the tone, and its influence is reinforced by long experience of managing low-level violence in Northern Ireland.

Doctrine is a contested notion in British military history. It is the formal expression of military knowledge but is not thought operationally essential. The police, for example, do not have doctrine and (it has often been argued) neither did the Army until recently.[20] Doctrinal development during the post-war years was undoubtedly more often the result of hasty improvisation than conscious debate, the Army preferring to rely on operational effectiveness, and the skill and experience of its personnel, supported by a close relationship with policy makers. The lack of specific guidance was never seen as a disadvantage; if anything it was a matter of pride. Indeed it is arguable that the UK's pragmatic *ad hoc* approach was a strength, being developed in the course of operations, rather than the artificial atmosphere of a ministry or staff college. Whatever the case, doctrine was not defined until 1993, the year in which the Army created the post of Director of Land Warfare to oversee its publication. Before that there were no designated staff or facilities devoted to doctrinal formulation – there was no need because the COIN and anti-terrorism tasks that occurred in urban areas were

understood as standard tasks that any professional army should be able to handle. Precisely why the approach changed in the mid-1990s is not documented but it is suggestive of the way in which attitudes towards urban operations could also change if such operations become more frequent.

The first edition of the Army publication *British Military Doctrine* was published in 1997. It was written specifically to create order out of the muddled approach that existed in relation to doctrine for the military strategic level. By 1999 the Army Doctrine Committee had agreed that the development of doctrine and concepts for a range of urban operations was a 'fundamental prerequisite'. For by then the formal publications covering urban operations represented a hierarchy of documents, ranging from *British Defence Doctrine*, followed by Army Doctrine Publications (ADPs), Army Field Manuals (AFMs), down to Procedures: *British Defence Doctrine* covers military–strategic doctrine, ADPs address the operational level, while AFMs and Procedures concern tactical doctrine. Urban operations are specifically addressed in Army Field Manual Vol. II, *Operations in Specific Environments, Part 5: Urban Operations* (1999) and Army Field Manual, Vol. IV, *Operations in Special Environments*, which replace Army Field Manual Vol. IV, *Operations in Special Environments, Part 5: Operations in Built-up Areas (OBUA)*[21] and AFM Pt 5 *Fighting in Built-up Areas*, hence the now discarded terms OBUA and FIBUA. The most recent publications place urban in the category of special environments, together with mountain, jungle, desert or cold climate operations, and focus on tactical issues such as skills, drills and minor tactics. But, like their US equivalent, British publications provide little guidance on contemporary concerns, such as minimising damage. The Army Field Manuals dealing with formation tactics, meanwhile, make no reference to city operations.

It was not until the end of the decade, in the wake of US developments, that a more systematic attempt was made to examine the challenges of urbanisation – significantly as part of mixed terrain – as it affects the Army. But little fundamental has changed. AFM Vol. IV's comment that, while the UK is acknowledged to have considerable experience in low-level tactics and training facilities, FIBUA experience is not widespread outside the infantry remains true. So does the observation that true combined-arms

training is rare. As chapter 3 of Vol. IV notes, although the USMC has developed a close air support (CAS) range for urban operations that should eventually include ground manoeuvre, RAF doctrine has yet to address CAS in urban areas.[22] And it seems probable that the War on Terrorism has, in the UK as in the USA, further reduced the perceived urgency of remedial work. Much depends on future operations. Regardless of whether urban insurgency becomes an issue in Iraq, or a major urban operation is undertaken in the near future, the probable development of urban doctrine is indicated by that associated with security operations in Northern Ireland.

The key feature of the doctrine developed for use in Northern Ireland was that it should be written for a type of operation, rather than a specific theatre. This seems reasonable – most expeditionary operations will not last 30 years. But the practical result was that by the late 1990s a range of publications dealing with internal security in Northern Ireland existed, from Army Doctrine Publications to Field Manuals, all of which were supposedly definitive. They were also repetitive and (because of the absence of a formal review process) sometimes contradictory. The problem was compounded by each unit trying to pass on the lessons it learned, with the result that by the late 1990s there was a significant but miscellaneous body of corporate knowledge covering tactics, techniques and procedures. AFMs were too formal to accommodate this detailed knowledge but theatre instructions and tactical *aides-mémoires* (which included urban tactics) could not explain how to check routes, patrol or fulfil other theatre-specific tasks. Similar characteristics are likely to apply to doctrine for urban operations.[23]

Future UK doctrinal development

The status of doctrine is accorded only to what is seen as important or significant, so it is revealing that urban operations do not have a single, well-defined doctrine whereas COIN and peacekeeping do. It emphasises that the operation is more important than the environment. On the other hand, there is a pronounced time lag in doctrinal development, which evolves in response to strategic change or significant operations. And evolution is always more pronounced than revolution in urban operations, primarily

because urban terrain negates many technological advantages and makes morale and training critical. For this reason any future British urban doctrine will probably evolve from existing thinking on COIN or peacekeeping. This is especially likely if future operations tend to involve chronic low-level violence rather than overt war. This pragmatic emphasis offsets the US reliance on technology and may yet produce a more balanced understanding of urban operations.

The British approach to urban operations developed from national experience in COIN and internal security operations in the 1950s and 1960s, when infantry conducted most COIN operations. Even so, it was not until 1969 that a COIN doctrine was published, and it was not updated until 1997.[24] Similarly, it was not until 1988 that the Army developed and published its first peacekeeping manual (Army Field Manual Vol. V, Part 1, *Peacekeeping Operations*). This reflects the low priority accorded to peacekeeping by the Army which, in the light of its experience of COIN in the colonies and support to the Royal Ulster Constabulary (RUC), judged the relatively benign operations in places like Cyprus as manageable without the need for specific doctrinal guidance. It also reflects the conservative nature of armies generally and their vested interests. Thornton makes the point forcibly in relation to peacekeeping, arguing that the British Army did not need a doctrine to instruct it during its mission to Bosnia, but that *Wider Peacekeeping* (*WPK*, the predecessor to *Peace Support Operations*) was needed to persuade, convince and impress civilian authorities that what the Army was doing in Bosnia was right.[25] In other words, *WPK* was political in that it served the Army's need to advertise why it acted the way it did in Bosnia. Doctrine was in this sense used to persuade and impress through its authoritativeness. There has been no such need regarding urban operations; urban combat did not occur in Afghanistan, while opposition and disorder in Basra in 2003 were managed with generalist security skills.

Any future urban doctrine will be framed by generic principles. It will no doubt be shaped by the fact that capabilities are judged to be more important for a small professional army than the formal categorisation of its missions, and that operational types are of greater significance than specific theatres. This approach will be to urban operations' advantage because of the premium

placed on transitional operations. Transition itself refers to 'movements from one phase of an operation to another in which significant changes are involved, either in mission, situation, task organization, forces, support arrangements, or command and control'.[26] And, as operations from Mogadishu to Baghdad show, the skills required to recognise and manage transition are especially critical in cities. All such skills are underpinned by warfighting capabilities. Linked to this emphasis is the dominant conceptualisation of the 'full-spectrum approach', which is described as a circular continuum of conflict prevention, conflict and post-conflict operations. Traditional hierarchies of distinct strategic, operational and tactical levels are now seen as obscuring the link between tactical activity and strategic effect, whereas the circular notion emphasises the centrality of policy goals. The operational dimension is meanwhile understood to include the various single-service, joint, multinational and multi-agency tactical capabilities needed to achieve contemporary political goals. As a result the three key aspects to be aimed for are tactical success, operational impact and the development of key capabilities. Strategic significance should then, it is argued, be achievable.

Many papers assessing the UK's strengths and weaknesses in the urban environment have been produced over the last five years by, for instance, the Ministry of Defence (MoD)'s Directorate General Development and Doctrine (DGD&D) and its Directorate of Force Development.[27] Yet it is difficult to conclude that much has really changed. This may not matter – professional forces are good at learning on the job. On the other hand learning on the job costs lives. Furthermore, an overreliance on experience gained in Northern Ireland, the Balkans and Iraq, supplemented by the seductiveness of US doctrine developments, could result in a steep tactical learning curve in the developing world. And despite its impressive experience the UK has yet to develop its own unique approach to urban operations. This is not to deny its tactical skills or the fact that military means alone cannot win urban operations. It is rather the positive criticism that at the operational level British forces follow US thinking but without its resources, and that the longer-term implications of existing or potential tensions between the two militaries are ignored. And British forces' continuing preoccupation with open spaces is reflected in their equipment. They have little ability to operate

within a nuclear, biological or chemical (NBC) scenario; their anti-armour systems cannot be fired within buildings, their ISR and communications systems do not work well in urban areas.

Differing national emphases

Developments in other democracies confirm the general picture conveyed by US and UK approaches to urban operations. This is partly the result of the contemporary emphasis on alliances and multinational operations, with their needs for compatibility and dialogue. Relevant fora include NATO, ABCA and FINABEL. NATO played a part in standardising terminology and approaches for the forces belonging to it. Although it was rarely included within the doctrinal debate surrounding related operations such as peacekeeping before 1997 (it was not involved in peacekeeping operations and tended to produce largely historical doctrinal statements), it proved a useful forum for debate, producing a consensus based on the views of the leading practitioners. But its future influence is questionable, given its dismissal by Washington during the war in Afghanistan. ABCA is the American, British, Canadian and Australian Armies programme established to develop interoperability and standardisation.[28] FINABEL is the grouping of western European nations comprising (initially) France (working language), Italy, Netherlands, Germany, Belgium and Luxembourg. The UK, Spain, Greece and Portugal have since joined.

As might be expected, the attention and resources devoted to urban operations varies between states, though a brief survey of Western states such as Australia, Canada, France and Germany indicates strong trends and many points of agreement. It is counterbalanced here by reference to developments in Russia, Singapore and China. But none of these countries provides open publications comparable to those in the USA, so it is often difficult to identify significant factors in doctrinal development and training in liberal democracies, let alone those in which urban operations include internal order.

Australia

Australia follows the US approach of consciously pursuing innovation and technology as a means of enhancement. Australian

doctrine recognises urban operations as having a unique relevance to future warfighting plans and force development, concentrating on the potential consequences of increasing urbanisation in the Asia–Pacific region. The deployment of a joint task force to East Timor indicated what this might mean, for high casualty rates could have resulted if militiamen had stayed to fight in Dili or if Indonesian forces had become involved. Urban operations are seen as a uniquely army matter though operations are promoted in terms of a combined-arms balance of mobility, protection and firepower. The Army's first urban operations doctrine – LWD-G 3-9-4 *Urban Operations (tactics, techniques and procedures*) – is due for release in 2003, and a dedicated training facility at Mt Bundey in the Northern Territory is due for completion at much the same time.[29]

Canada

Despite Canada's impressive experience during the Second World War, it has never devoted special attention to urban operations.[30] They were neglected in the post-war years, initially, perhaps, in reaction to the knowledge that urban war is the worst kind of infantry battle, or because the use of nuclear weapons meant that cities would be destroyed. Priority was given to operations in cold climates, mountains and jungle instead; until recently the 'Particular Operations' series of tactical doctrine manuals dealing with specialised operations in closed country did not include city fighting. The treatment of urban operations remains thin, perhaps because it is seen as alien to the precepts of manoeuvre warfare, and it is probable that for doctrinal reasons Canadian forces will avoid fighting in cities.

France

In contrast to Canada, the French Army's conviction that avoidance is not an option is based on its extensive experience of operating in the cities of Algeria, Lebanon, Francophone Africa and the Balkans. French doctrine recognises that urban areas will play an important role in future conflict and that control is a more significant challenge than fighting. The use of populations as an instrument of contemporary conflict, for example, has meant that French Army units have had to move into the unfamiliar realm of crowd control. Operations in Kosovo have been formative in

this respect and there is a strong awareness that, while warfighting may be the ultimate priority, the army's main mission is to secure stability. This means that the military are no longer narrowly focused on the Clausewitzian concepts of decisive battle.[31]

Germany

Germany's FIBUA specialists are light infantry that form part of either crisis reaction or home defence forces.[32] But the major lesson from Germany is that doctrine is perishable and that its development is shaped by political conviction as much as historical experience. German doctrine is now meagre whereas in 1944 it was mature and complex; its robust guidelines for defence, for example, drew heavily on its experience on the Eastern front.[33]

Russia

The Russian approach to urban operations has been the subject of extensive international monitoring since the 1994–45 battle for Grozny. It is more ruthless than anything a contemporary liberal democracy could countenance yet Grozny represents a warfighting laboratory for the West (this is considered in more detail in Chapter 6).[34] Soviet tactics remain of interest too, thus emphasising the continuing interest or relevance of historical experience. The Soviets placed less emphasis on fixed positions than most Western forces of the time, concentrating instead on manoeuvre and patrolling, outflanking, counter-attacking and moving beyond immediate objectives. Such tactics were initially costly in terms of casualties but were thought to result in fewer casualties overall. The requirement to integrate and co-ordinate all arms was a prerequisite. The USMC has since experimented with developing storm tactics based on this practice, reckoning that it could cut the ratio needed to succeed in attack (potentially from 6/8:1 to 3:1) and significantly reduce casualty rates.

Singapore

The preceding approaches are essentially Western yet they are in the main consistent with those of Singapore. Internationalisation has played some part in this – it would be surprising if Israel, which has provided military advice and training to Singapore for many years, has not provided urban training and relevant

technology.[35] But it also suggests that differences (and challenges) are mainly a matter of emphasis and justification. Singapore is a single, small, vulnerable island city-state that is a hub city and the biggest port in Asia, yet the main feature of the Singaporean approach appears to be its ambitious nature and reliance on an untried combination of technology and conscripts. Since it separated from the Malaysian federation in 1965, Singapore has built well equipped and highly trained armed forces based on a small professional core supplemented by large numbers of conscripts and reservists. Army doctrine (which leads) stresses high-intensity, high-technology warfare (the '24-hour battle'). But Singapore has no experience of warfighting. The Singapore Armed Forces (SAF) are disciplined and potentially well trained for urban operations yet, as Huxley has noted, they are a citizen force, 'dependent for its personnel on essentially acquiescent rather than enthusiastic conscripts and reservists'.[36] Singapore's greatest challenge may lie in realistically estimating its potential performance.

China

Significantly the military consensus breaks down most clearly over China. China's urban doctrine is unknown but is probably based on three generic vulnerabilities it has identified in the US approach. First, Americans value human life, especially that of their nationals, highly and only fight hard when their own interests are directly threatened – though they will fight if they can do so from a distance and with minimal own casualties. Second, they rely on technology or proxies to keep their troops as far from harm as possible. Third, force protection is a critical issue for commanders.[37]

In contrast, China's own approach appears innovative, and its strategists may be establishing a new framework for urban operations. In 1999 a book published in Beijing, *Unrestricted Warfare*, described professional armies as dinosaurs, which lack strength commensurate to their size.[38] Their adversaries are described as rodents with great powers of survival, which can use their sharp teeth to torment. The authors' claim that future wars will be unlimited was widely taken as meaning that a militarily and economically weak nation must break the traditional precepts of war in order to defeat technologically and militarily

powerful countries (that is, the USA). The political significance of the book may have been overrated but several of its features are thought provoking. One is the notion of an expanded battlespace. This focuses on the concept of an omnipresent man-made space or technological space that differs from physical space; air, sea, land, length, width and height have no significance. Linked to this is the author's development of principles of war for a non-linear battlespace. These include omnidirectional thinking, which incorporates non-military fields such as politics and psychology, and simultaneity, which means the co-ordination of forces, systems and influences from multiple fields. The authors also emphasise that new types of operation will be conducted in non-military spheres of conflict.

The imagery employed in *Unrestricted Warfare* is striking but its significance is difficult to assess. It appears to challenge conventional templates of urban operations, yet the suggestion that commanders should be unrestricted in their thinking about conflict and question conventional wisdom is common in many military colleges – and equally rare outside them.

Characteristic Approaches to Urban Operations

From this survey the major characteristics of contemporary doctrinal approaches by state forces can be listed:

- Urban operations are increasingly understood as a combined-arms or even joint task. Even so, the dismounted or infantry function remains at the heart of urban operations and (with the exception of the USMC) armies take the lead. The core capability of aggressive close combat underpins everything and most units have general utility in cities.
- Most armies share four components of philosophical understanding or doctrine:
  - The principles of war, proven over decades and innumerable operations, are thought to remain valid. They include concentration of force, economy of effort, and maintenance of morale.
  - These principles have to be interpreted in the light of current circumstances by appropriate training and easily understood guidance.

  - Thinking through urban operations requires a predictive component, analysing recent conflicts in order to learn from them. Conceptual development needs a rolling focus that looks ahead, with indicators for several decades where possible.
  - Prediction must build on trends even though major discontinuities have the potential to change fundamentally the strategic environment.
- Past experience can inform the predictive element in urban operations. There is always the danger of attempting to win the last war, but past lessons are often relevant in urban operations. The reason is simple. While military operations other than war have changed dramatically in the post-Cold War context, warfighting in cities has not. The greatest danger most armies face is that their politicians do not appreciate this.

There is thus a marked degree of consensus across militaries regarding urban operations, with most accepting that urban terrain complicates operations in ways that other environments do not. The multi-dimensional, man-made terrain of cities, combined with the presence of non-combatants, obstructs manoeuvre and the application of firepower. The influence of complex political, social and cultural systems compounds the physical difficulties and ensures that success ultimately depends as much on political calculations as tactical achievements. In consequence, most armies agree that cities should be bypassed where possible, and that protection and survival should be their chief concern. Conceptually most pass the initiative to their potential adversaries. At the same time most emphasise the desirability of innovation and 'experimentation' even when innovation goes against the norms and values of both the military institution and its host society. Ironically the virtues of conceptual and technological innovation are stressed by what is usually one of the most conservative institutions in a state.

The challenge for Western forces is to develop an effective and politically acceptable means of conducting operations. Innovative doctrine is, theoretically, one way to achieve this, but doctrine's very formality means it is reactive and unlikely to produce new solutions to the fundamental problem of balancing tolerable

levels of casualties and collateral damage with military success. Some forces, such as those in the USA and Singapore, think that answers are most likely to be found in technological advances, while others (primarily in Europe) are less convinced; all agree that technology can represent an enabler (as such it is the focus of Chapter 3). Even so, its possession cannot hide the fact that new and novel ways enabling risk-averse forces to conduct urban operations with minimal danger probably do not exist. Neither can it hide the fact that there has been no radical revision of strategy for urban war.

Notes

1. JWP 0-01, *British Defence Doctrine*, 2nd edn (Shrivenham: JDCC, 2001), p. 3–5. The notion of 'tempo' is integral to this. It is facilitated in British forces by 'mission command' in which subordinates are assigned a mission without specifying how it must be accomplished.
2. Ibid.
3. The argument is that of F. Heisbourg, 'Europe and the Transformation of the World Order,' *Survival*, 43, 4 (2001), pp. 143–8.
4. The old NATO is, according to Heisbourg, dead. Compare the more positive assessment of NATO's future in P. Gordon, 'Nato after 11 September', *Survival*, 43, 4 (2001), pp. 89–106. NATO's future is, at best, unclear; it is not easy to reinvent a small, secretive 54-year-old organisation established at the height of the Cold War to deal with a threat that no longer exists.
5. See 'Rumsfeld tells Nato to adapt defences', *Financial Times*, 19 December 2002; 'Reshape British forces to face terrorists, MPs recommend', *The Guardian*, 18 December 2001.
6. Compare P. Johnston, 'Doctrine is Not Enough: The Effect of Doctrine on the Behaviour of Armies', *Parameters*, 4 (2000), pp. 30–9.
7. JWP 0-01, *British Defence Doctrine*, 1st edn (London: MOD CS (M)G, 1996), p. 1.2. Italics in original. *British Defence Doctrine* is concerned chiefly with strategic-level operations and heads the hierarchy of British doctrinal publications. The phrase is missing in the second edition of 2001 but it remains accurate. For NATO usage see AAP-6 NATO Glossary.
8. Quoted in R. Glenn (ed.), '*…We Band of Brothers': The Call for Joint Urban Operations Doctrine* (Santa Monica, CA: RAND, 1999), p. 17.
9. For a valuable analysis of US forces' experience see M. Doubler, 'Battles of Buildings and Cobblestones', in M. Doubler, *Closing with the Enemy: How GIs Fought the War in Europe* 1944–1945 (Lawrence, KS: University Press of Kansas, 1994), pp. 87–109.

10. Spending comparisons are, however, of limited value. In a letter to the *Financial Times*, 9 February 2002, P. Robinson points out that this result comes from counting up the defence budget of other countries in dollar terms at current exchange rates. He argues this is of questionable value since US defence strength would not decline by 10 per cent if the value of the dollar declined by an equivalent amount. Other high-spending states such as China and India expend their budgets on strategically immobile land armies. Digitalisation by the US Army in the aftermath of the Gulf War indicates the potential costs involved. Based on the financial year (FY) 2001 budget, the army planned to invest $3bn annually between FYs 2001 and 2005 in modernising its digital enablers for weapons systems, tactical sensors and the command, control, communications, computers and intelligence, surveillance and reconnaissance (C4ISR) infrastructure. See M. Kauchak, 'Transforming Land Warfare: US Army Digitization Initiative Leaps Ahead', *Armed Forces Journal International* (July 2001), pp. 14–17.
11. C. Coker, *Waging War without Warriors? The Changing Culture of Military Conflict* (Boulder, CO: Lynne Rienner, 2002), p. 63. For representative advocacy of an indirect approach see R. Scales, 'The Indirect Approach', *Armed Forces Journal International* (October 1998), pp. 68–74.
12. The use of force was most noticeable in the 1940s but cannot be discounted as irrelevant today. In 1944, US combined arms tactics involved a 'willingness to use heavy calibre weapons and an abundance of explosives at close quarters … Americans were not disturbed by their uninhibited use of firepower at close range and usually expressed great pleasure with its results. As US troops moved towards Germany, they exhibited a tendency to use any means that would inflict maximum damage on the enemy while minimizing their own casualties.' Doubler, *Closing with the Enemy*, p. 109. More recently, anecdotal evidence suggests that 'trigger-happy' US troops used excessive force in Iraqi cities such as Nasiriya. See, for example, 'Allies divided over battle for hearts and minds', *The Guardian*, 1 April 2003.
13. The most readable account of Hue is N. Warr, *Phase Line Green: The Battle for Hue, 1968* (New York: Ivy Books, 1997).
14. This section is based on R. Glenn, 'Fox Trot: Seeking Preparedness for Military Urban Operations', *Armed Forces Journal International* (May 1999), pp. 46–9. The Joint Staff designated 80 areas for the critical development of urban capabilities. These included doctrine, Department of Defense (DoD) leadership, communications, computers, training, intelligence collection and modelling and simulation. See R. Gangle, 'Urban Operations in the 21st Century', *Modern Simulation & Training*, 4 (2000), pp. 6–13.
15. C. Krulak, 'Operational Manuever from the Sea', *JFQ* (Spring 1999), pp. 78–86. The MCWL homepage is available at mcwl-www

.cwlmain.org. For details of Urban-Warrior see 'Urban Warrior: First Impressions', *Marine Corps Gazette* (June 1999), pp. 4–5. For a review of recent experiments see R. Gangle, 'Project Metropolis', *Marine Corps Gazette*, 86, 5 (2002), pp. 47–9.

16. C. Krulak, 'Changing the Heading: USMC Commandant Puts Training, Modernization Efforts on 21st Century Course', *Armed Forces Journal International* (January 1998), pp. 32–5. Unlike the USMC, the Army cannot dominate a conflict by, for example, converting heavy mechanised units into light air-transportable mechanised forces. See B. Dunn, 'Rethinking Army–Marine Corps Roles', *JFQ*, 26, 4 (2000), pp. 38–42.
17. See, for example, A. Vick, *et al*., *Aerospace Operations in Urban Environments: Exploring New Concepts* (Washington, DC: RAND, 2000).
18. Personal communication, D. Gleeson, December 2001.
19. This understanding may be controversial, particularly in the USA, but it does not challenge the generally accepted need for combined arms teams. If anything the UK's vulnerability in this context is viewed as a matter of concern. But functional and national cultures matter. Pragmatism and the intellectual acknowledgement of change are often consciously balanced by reference to historical experience in British Army culture. Hence the prevalence of articles such as 'The Use of History in the Development of Contemporary Doctrine' by (Colonel, later Brigadier and Director of Land Warfare) C. Grant, in J. Gooch (ed.), *The Origins of Contemporary Doctrine*, Occasional, 30 (Strategic and Combat Studies Institute, 1997), pp. 7–17. The implications of the similarities and dissonances between UK and US approaches have yet to be fully investigated.
20. It is arguable that it was not that doctrine did not exist earlier but that it lacked status and was not used. See C. McInnes and J. Stone, quoted in M. Melvin, 'Introduction', in B. Holden Reid, *A Doctrinal Perspective 1988–98*, Occasional, 33 (Strategic and Combat Studies Institute, 1998), p. 6. Compare B. Posen, *The Sources of Military Doctrine* (Ithaca, NY: Cornell University Press, 1984).
21. Like most urban publications this includes an historical supplement, providing useful observations on the capture of Ortona (1943), British operations in north-west Europe (1945), Suez City (1973), Chechnya (1995) and operations outside Sarajevo (1995).
22. The British Air Warfare Directorate denied interest in urban operations when questioned in 2000. Personal communication, January 2000. Whether the emphasis on joint and combined operations during the war in Iraq signals a real shift is debatable.
23. An authoritative (if relatively uncritical) review on the future battlefield published by the then director of land warfare illustrates the relevant features of contemporary orthodoxy. See C. Grant, 'Operations and Doctrine: The 2015 Battlefield', *British Army Review*, 128 (2001–02), pp. 5–13. The key assumptions underlying

Grant's paper are presented in B. Moore, 'An Army for 2025+', *British Army Review*, 128 (2001–02), pp. 14–17.

24. *Land Operations, Vol. III, Counter-revolutionary Operations* (London: HM Stationery Office, 1969).
25. R. Thornton, 'The Role of Peace Support Operations in the British Army', *International Peacekeeping*, 7, 2 (2000), pp. 41–62.
26. Personal communication, May 2000, quoting the draft US Urban Operations Concept Paper, p. 14.
27. DGD&D is the Army's authority for concepts, force development, doctrine and sustainability. It acts as a catalyst for change in order to maximise fighting power, and provides the foundation for emerging doctrine and force development within a joint and multinational environment. Force development suggests what the future army will look like. The Directorate of Land Warfare co-ordinates all aspects of force development, concepts and doctrine across the land component.
28. For details see G. Johansen, *The ABCA Programme: Rhetoric to Reality*, Occasional, 44 (Strategic and Combat Studies Institute, 2002).
29. See K. Wolfe, 'Urban Warfare Requires New Thinking', *Asia–Pacific Defence Reporter* (March 2001), pp. 8–10; www.defence.gov.au/army/cal. Contrast its omission in M. Evans, *Forward From the Past: The Development of Australian Army Doctrine, 1972–Present,* Study Paper 301 (Land Warfare Studies Centre, 1999).
30. During the battle of Ortona in Italy, 1943, the fighting between the 2nd Canadian Brigade and a well-organised German defence was at such close quarters that artillery support was impossible, and so ruthless that no quarter was given. Canadian involvement in Caen in 1945 was similarly impressive. Canadian forces are usually credited with the tactical innovation of mouseholing, of blowing holes through walls and adjacent buildings so that they could advance without exposing themselves to enemy fire. This was taught in drill schools from 1942 onwards. For details of Ortona see M. Dewar, *War in the Streets: The Story of Urban Combat from Calais to Khafji* (London: BCA, 1992), pp. 26–33. For Caen see H. Maule, *Caen: The Brutal Battle and Break-out from Normandy* (Newton Abbot: David & Charles, 1976). Information about the conduct of contemporary urban operations is included in the tactical doctrine manuals of relevant arms and services such as armour, infantry and engineers. See R. Legault, 'The Urban Battlefield and the Army: Changes and Doctrines', *Canadian Military Journal*, 1, 3 (2000) (www.journal.dnd.ca).
31. L. Francart and J.-J. Patry, *Mastering Violence: An Option for Operational Military Strategy* (Paris: Armée de Terre, 1998), p. 9. See also R. Pengelly, 'French Army in Profile: From Hollow Force to Hard Core', *Jane's Intelligence Review*, 6 (2000), pp. 40–51; 'Armée de Terre', *Military Technology*, Special issue (2001), pp. 10–13.

32. For German Army FIBUA tactics see C. Schulze, 'Fighting in Built-up Areas [pt 1] German Army Style', *Combat & Survival*, 13, 4 (2001), pp. 8–10; C. Schulze, 'Fighting in Built-up Areas [pt 2] German Army Style', *Combat & Survival*, 13, 5 (2001), pp. 18–22. See also Legault, 'The Urban Battlefield and the Army'.
33. Compare the 1939 'German Notes on Street Fighting' with an account of Ortona's defence in 'How the Germans Defend Buildings', *Military Review* undated (1944). Both are available on the CSS MOUT/Urban Operations Resource Page (www.cascom.army.mil/multi/mout). See also publications such as K. Margry, 'The Battle for Aachen', *After the Battle*, 42 (1983), pp. 1–27.
34. It is also a laboratory for thinking about urban operations. See, for example, Kilunin's statement that 'one of the most important problems in local wars and armed conflicts as well as in modern-day peace operations is how to preserve the city infrastructure and to minimise losses among friendly forces and the civilian population'. V. Kilunin, 'New Views on Urban Warfare', *Military Thought*, 7, 3 (1998), p. 43. The article suggests new ways of approaching urban operations. It speaks of capturing a city peacefully by means of psychological pressure (such as ultimatums with details of their consequences, or by exploiting the interests or weaknesses of individual enemy commanders). It refers to the need to evacuate populations – something neglected by most Western forces for several decades. It also promotes the use of sub-lethal weapons employing light, sound, heat, chemical irritants and electromagnetic waves. It argues that their use makes combat missions possible and acceptable by avoiding civilian casualties, rubble and fires. The use of tear gas by Western police forces is described as 'gas attacks'.
35. For Israeli doctrine, which is based on offensive manoeuvre warfare, see www.idf.il/english/doctrine/doctrine.stm. Urban operations are a politically sensitive topic in a state such as Singapore, and senior officers usually describe enquiries regarding Singapore's approach as 'inappropriate'. The only open reference to FIBUA training available in 2002 was a brief news item, 'NS men operationally ready for home defence', *MinDef Internet Web Service,* 16 December 1997 (www.mindef.gov.sg).
36. T. Huxley, *Defending the Lion City: The Armed Forces of Singapore* (Crows Nest, AU: Allen & Unwin, 2000), p. 141. Huxley provides the only comprehensive account of Singapore's Armed Forces (SAF).
37. See E. Ahrari, 'Unrestricted War: The Leveller', *Jane's Intelligence Review* (February 2000), pp. 44–6.
38. Qiao Liang and Wang Xiangsui, *Unrestricted Warfare: Assumptions on War and Tactics in the Age of Globalization* (Beijing: PLA Literature and Arts Publishing House, 1999). For an evaluation see 'Essays on Unrestricted Warfare', *Small Wars & Insurgencies*,

11, 1 (2000), pp. 112–29. A comparison with North Korea's approach to urban war could be informative, not least because Pyongyang has explicitly incorporated irregular and psychological warfare into its attempts to formulate an indigenous revolutionary strategic theory. That the country is reputed to be working with criminal gangs to distribute drugs in Japan is suggestive. For a relevant analysis of North Korea's strategy see J.-J. Park, 'The Evolution of North Korea's Revolutionary Warfare: Strategies and Tactics', unpublished PhD thesis, University of London, 2003.

3 Technology and War

The way forces make war hinges on their technological advantages. At the same time the way in which technology is used depends on how the nature of war is understood. It is significant, therefore, that there is a strong professional consensus that urban war retains more in common with fighting in the 1940s than most contemporary operations. So too is the fact that there is as yet no evidence that the revolution in military affairs (RMA) has caused a fundamental shift in the nature and conduct of urban operations; sophisticated technologies may have ensured that Baghdad was taken quickly, but they could not manage the consequent disorder, which required conventional street-craft and peacekeeping skills. Indeed, forces may even look to the past for tactical advantage. The capture by the Israel Defense Force (IDF) of the densely populated Palestinian refugee camps in Nablus, Jenin and Tulkarm in early 2002, for example, was credited by the *Jerusalem Post* of 9 March 2002 to an IDF commander's rediscovery of mouseholing. Paratroopers and Special Forces from the Israeli Home Front Command used electric-powered carbide discs, sledgehammers and small explosives to punch their way through the cinder block walls of the camps, so avoiding snipers and booby traps in the narrow alleyways. Yet the very consensus that success relies on experience and training rather than technology makes the search for technological solutions doubly attractive; technology

could represent the decisive advantage leading to military success.

The potential advantages of technological developments are contested. Many of the technological fixes on which hopes are currently pinned are immature or, while conveying advantage, encourage an overreliance on equipment. As Mogadishu showed, highly trained US Rangers do not own the night when they leave their night-vision goggles behind. Yet it is equally clear that technology is a key driver of incremental change in other operations: why should urban operations be different? Thus the Gulf War of 1991 introduced precision-guided munitions that seemingly changed the balance between air and land forces.[1] The use of smart munitions in the NATO bombing campaign against Serbia in 1999 then appeared to show that it was possible to win a war by airpower alone. And in Afghanistan the use of complex communications systems, which included both the new Global Hawk unmanned reconnaissance aircraft and existing Predator unmanned aerial vehicles, meant that President Bush was able to observe the battlefield almost in real time while sitting in the White House.[2] Furthermore, it is generally accepted that the use of technology to equip soldiers and improve their protection and mobility in cities is a priority: 'In today's climate of opinion as affecting casualties, the only alternative to acquiring specialist equipment for OBUA [Operations in Built-Up Areas] may be to abandon the idea of fighting a serious enemy in an urban environment.'[3] But the relationship between technology and urban operations is more nuanced than this picture suggests. Western forces do avoid cities wherever possible because technology cannot as yet offset all the dangers of urban environments; the West's preferred means of operations rely on distance and precision – but it currently chooses not to use its advantages to their destructive limits because of scruples about casualties and collateral damage. This makes it vulnerable to the fact that as technological advantages in open areas grow so does an adversary's incentive to locate his forces in cities, which makes the search for technological solutions all the more urgent.

This chapter uses the potentially critical variable of technology to explore the nature of contemporary urban operations. It questions whether high technology can 'fundamentally alter the course of urban warfare in the future',[4] arguing that while

technological developments may prove critical in the long term there is as yet no evidence of real change in the way urban war is made. It does this by reference to two key debates, both of which are associated with shaping the battlefield (that is, setting the conditions for success by eliminating an enemy's capability to fight in a coherent manner before own forces are deeply involved). The first debate concerns the supporting and enabling roles of technology and the extent to which technology can supplement (or even be a substitute for) men in urban operations. The second concerns the utility of airpower in urban operations. The role of airpower – which is, of course, highly dependent on technology – encapsulates many of the issues under consideration. It is true that the recent integration of long-range missiles with smart submunitions, precision weapons and attack helicopters capable of deep operations represents a major development. But the fact that airpower is now the West's preferred instrument of force raises a further question: to what extent does urban war challenge the Western way of war? The answer will be evident in future street fighting.

The Lure of Technology

Technology promises dramatic improvements capable of offsetting the disadvantages of urban terrain; it promises to solve equipment problems, offset the scale of cities, replace men with machines and lessen the dangers of friendly casualties. If delivered, such promises could change the way the military do business, not least because 'the most important single lesson learnt from WWII experience of OBUA is to use machinery rather than men'.[5]

The potential utility of technology is evident when the scale of cities is considered. The sheer size of many cities makes the traditional need to commit large ground forces a real concern, especially since Western societies are averse to casualties and their militaries are overstretched and underrecruited. Seoul illustrates the potential problem. When the Americans recaptured Seoul in 1950, the combined US Army and Korean population was about 1 million. Today the population of Seoul is 13 million while the US Army is half a million strong. These figures, taken in conjunction with US Marine Corps (USMC) experiments that

indicate force casualty rates of about 46 per cent, encourage a reliance on technology even when that technology is unproven; and high levels of friendly casualties reinforce it. At the end of the two-years' experiment associated with Urban Warrior, the USMC found that progress had yet to be made in reducing friendly casualties. Historical records show that the average friendly rate from the Second World War, Korea and Vietnam was roughly 30 per cent a day whereas those for Urban Warrior averaged 40 per cent. Technology could address such problems by allowing commanders to achieve selective dominance without physically occupying a city; for example, synchronised high-resolution intelligence and enhanced precision munitions could enable commanders to isolate the enemy and separate combatants from non-combatants.[6] Alternatively, a combination of existing technology and tactical creativity could result in the seizure of a city; Baghdad, with its population of 5 million spread over 15 square miles, was quickly seized by 'reconnaissance in force' operations. But the lessons of Baghdad are not necessarily transferable, relying as they did on US professional skills and the inexplicable failure of an organised Iraqi opposition. That technology has the power to transform urban operations remains wishful thinking and optimism over typical casualty figures is, on the basis of experience, probably unjustified.

The role of technology

It is not an issue that technology can improve operational capabilities. Allied operations in Iraq, for example, were able to exploit highly integrated command, control, communications and computer-based intelligence, surveillance and reconnaissance (C4ISR) assets that enabled them to achieve significant advances in narrowing the sensor-to-shooter gap (a key component in 'net-centric' warfare). This built on the remarkable synchronisation of air and land operations developed during the war in Afghanistan in 2001, when commanders in Florida ran the campaign using data from a bank of sensors ranging from Special Forces eye-witness reports to satellites, U-2 spy planes, Joint Stars battlefield surveillance aircraft, AWACS early warning aircraft, a British Canberra photoreconnaissance plane and Predator and Global Hawk spy drones. Additionally, US Rivet Joint and British Nimrod

R1 aircraft gathered signals and electronic intelligence. The value of synthesising such a mass of data into a coherent picture of the battlespace is self-evident. The real debate concerns the extent to which it can be transferred to cities and ensure success across a range of urban operations. Similarly, the contribution such technology can make towards mission success, which depends on a combination of mission accomplishment and acceptable levels of friendly and non-combatant casualties, remains unclear.

Future improvements in key areas such as information technology, robotics, digitalisation and non-lethal weapons could, theoretically, provide the foundations for a new approach to urban operations. Information technology could create accurate positioning systems and sensor webs capable of overcoming line-of-sight problems, and could facilitate information superiority. Unmanned ground systems could perform reconnaissance duties, provide logistical support or even conduct assaults.[7] Effective non-lethal weapons (NLWs) could reduce non-combatant casualties. But such developments are aspirational rather than mature, no new core competencies are evident, and digital and space technology has not made old competencies irrelevant. It is not known whether a combination of overhead sensors and precision munitions can ensure success against an enemy located in cities, especially cities such as Baghdad or Pyongyang, riddled with tunnels built for security purposes. New methods of deploying sensors may prove critical but it is unclear whether sensors developed for use in complex terrain are automatically useful in cities, steep valleys and cave complexes may have effects comparable to those of buildings but most do not contain numerous non-combatants. In other words, technology is not synonymous with capabilities, and even successful technological solutions must still be translated into doctrinal, legal, organisational and training programmes before they can make a lasting difference to operations.[8] Most developments are in aid of existing roles and functions, and are unlikely to fundamentally change operations. They address tactical issues and are targeted to achieve solutions to existing problems. Nanotechnology, for example, is being used to create light armour that will solve the problem of the heavy weight of personal equipment.[9] Battlefield robotic resupply does not yet exist but it too would address an age-old problem. Predator unmanned aerial vehicles (UAVs) have been in production since

1995. Not even digitalisation, which is seen as the key to integrating and managing core and enabling capabilities (such as firepower and sustainability), undermines contemporary approaches. Furthermore, digitalisation's goals remain conventional even if (according to the then British Director of Land Warfare) it 'will be the biggest immediate agent for change' in how operations are undertaken.[10] Despite the ambitious language, the emphasis of all such programmes is on improving the urban capabilities of current (that is, legacy) forces, which have been designed for operations in open environments. A major operation in a city such as Seoul could, of course, result in significant adaptation but, for the time being, the future 'US Army XXI', to take the most obvious example, is to be based on information dominance and the efficient synchronisation of a wide range of operations. It is to gain this capability by means of incremental upgrades to current systems and the introduction of new digital information networks. Digitalisation will, it is argued, result in a Force XXI that can seize the initiative, dictate – and maintain – the tempo at a pace greater than the enemy's ability to respond. Yet the ability of a digitised force to achieve this against an intelligent and motivated adversary in a third-world city is seemingly unquestioned.

Similar reservations apply to developments in the UK. A combination of communications systems such as Bowman, the British Army's Future Integrated Soldier Technology (FIST) programme and C4I and ISR assets could undoubtedly change the way operations are fought.[11] Over-the-horizon weapons, battalion-level UAVs and an improved picture of the battlespace could accelerate change. Yet it is questionable whether this would of itself change the nature of operations. Successful digitalisation could actually drive intelligent adversaries into cities, where digitalisation confers less advantage. ISR systems, for example, are not optimised for cities and there are limitations on the granularity of information they can process. ISR cannot see inside buildings or detect underground activities, so overreliance on new or integrated ISR technologies could represent vulnerability. War will involve close operations at some stage and although the digitalisation programmes most relevant to urban operations are dedicated to improving capabilities for dismounted close combat they cannot ensure success.[12] Moreover, most objectives

remain conventional. The FIST programme, for example, aims to enhance the dismounted soldier's close-combat capabilities, lethality, mobility, survivability and sustainability. In other words, to improve his ability to move, find and engage the enemy – goals which could be understood by a soldier from any period.

Balancing old and new technology

There is as yet little evidence that advanced technology can fundamentally change the nature of urban conflict in the short term. A major breakthrough seems most unlikely because urban war interplays old and new technology to a greater extent than most operations. Traditional technology still matters, as the presence of Abrams and Challenger main battle tanks on the streets of Baghdad shows. And focusing on futuristic technology ignores the fact that conventional weaponry still represents the greatest threat in cities.[13] Electronic, precision and chemical weapons have great potential but the 30-year-old rocket-propelled grenade (RPG) remains the definitive urban weapon; adapted with a metal plate to act as a shoulder-fired surface-to-air missile (SAM), it can be used as a mortar, a breaching weapon or against armour.[14] Mortars remain the primary indirect-fire weapons for forward units in assault and defence. Their high rate of fire, short minimum range and high trajectory give them the ability to fire in tight confines. Mortars can provide obscuration, neutralisation, suppression or illumination fires; they either kill the enemy or allow infantry to close and kill him.[15] Flamethrowers and snipers were used as often in Grozny in 1995 as in Aachen or Berlin in 1945.

All recent operations show that the intelligent use of low or conventional technology by a motivated adversary can undermine the technological tactical capabilities that can theoretically create a significant advantage.[16] Chechen weapons of choice in Grozny included IT gadgets, such as cellular phones and commercial scanner systems, which acted as force multipliers; mobile TV stations were used to override Russian transmissions; and overseas funds and assistance were raised over the Internet. Twenty years before, the IDF's advance into the Lebanon had also been severely obstructed by a poorly organised opposition equipped with a few hand-held technologies, limited supplies of

medium artillery, and a few obsolete tanks. As Russian and Israeli (and US) forces relearned, poorly armed adversaries should never be underestimated, least of all by forces whose confidence is founded primarily on technological capabilities and national power. All too often the possession of technological advantages encourages complacency. And the fog and friction of war are as strong as ever. In other words, the extent to which technology can supplement (let alone replace) men has yet to be determined. Technology is indeed an enabling force, but the issues are how it is used and its effectiveness, and here the interplay between old and new capabilities is complex.

In summary, the way the West makes war hinges on its technological advantages, but urban operations seemingly negate many of the most promising new technologies. The way technology is used depends on how war is understood, and operations in cities are understood as primarily a tactical challenge. Much of the effort devoted to developing technologies for cities has therefore concentrated on materiel for personnel at the lowest levels of operations – and much of it is aspirational, rather than mature. As a result, technology runs the risk of becoming a tactical panacea or diversion whereas it is better regarded as a support or enabler.[17] It is not a lead. Not only is there little evidence that technology has fundamentally changed the nature of operations, but current vulnerabilities (which includes the West's known preference for fighting from a distance) suggest that the West has yet to realistically assess the conditions under which it might fight sustained or chronic urban operations against an intelligent and well organised enemy.

Airpower

The preceding observation is reinforced by the fact that the West's preferred way of waging war depends on airpower, which exemplifies the power of technology. Airpower is increasingly attractive to politicians because it can be used in a relatively discriminating, precise or cost-free manner. In addition, recent operations have seen an integration of air and land capabilities that results in impressive synergies, which reinforce the US's and UK's commitment to joint and combined operations. Tactical

air strikes blended with tanks, infantry and artillery to great effect in Baghdad, while constant close air support (CAS) helped ground forces maintain the tempo of attack. That this built on the successful combination of Special Forces, local fighters and long-range airpower seen in Afghanistan two years earlier is, many would argue, indicative of a strong trend and future possibilities. Whether airpower has the potential to shift the balance between air and land assets in cities is, however, debatable. The question addressed here is therefore whether the urban hypothesis that results from the material presented in Chapters 1 and 2 is fundamentally changing as a result of the expanded role of airpower. This chapter argues that it is not.

Coalition CAS worked in Baghdad because the USA had almost total air dominance; the Iraqi air force never flew and Iraqi land-based air defences did not defend Baghdad. But airpower could not stop looting in Baghdad, or ethnic cleansing in Kosovo; and it was unable to destroy mobile groups of lightly armed forces in either Kosovo or Afghanistan. NATO carried out a 78-day air campaign, based on total air (and information) superiority, grounded only by bad weather, yet it was not sufficient to get President Milosevic to the negotiating table. That took a combination of the air campaign, pressure from President Ahtisaari of Finland and former Prime Minister Chernomyrdin of Russia, and the threat of a ground operation. American bombers could easily have destroyed Najaf, Belgrade or Kandahar but they did not. Destruction on the scale visited on Grozny is seemingly no longer an option for Western forces. Not only would such tactics have destroyed US and NATO claims to legitimacy but also the ensuing holding operations would still have required manpower-intensive operations. It may be that airpower is still best used in the open countryside surrounding urban areas, where tactical strike aircraft (perhaps tied to unmanned sensor assets), high precision weapons and helicopters can threaten conventional forms of enemy operational and tactical manoeuvre; that is, before sustained urban operations, perhaps involving irregular forces, take place.

Airpower's role is critical in an age of discretionary and expeditionary operations but it remains primarily supportive and enabling, rather than decisive or strategic, in cities. This is because success demands a physical ground presence which airpower

cannot provide.[18] Reconnaissance and surveillance from air or space can play an invaluable role in providing intelligence – but urban operations are more likely to be conducted at 20 than 20,000 metres. It is, of course, possible that airpower's role within operations that involve humanitarian relief, enforcement or warfighting could expand if industry promises are delivered. But the inescapable fact remains that the current consensus of opinion, even in the USA, is that urban terrain and the presence of civilians negates many technological advantages. This extends to the use of airpower, yet it is not reflected in air doctrine. Thus the Royal Air Force (RAF)'s current doctrinal publication *AP 3000* refers to the effects of terrain cover for the concealment of surface forces and to considerations affecting ease of surface movement. It speaks of the ease with which air vehicles can detect, locate and track surface targets when terrain cover is lacking, but there is no acknowledgement of the problems an abundance of cover will present.[19] In the aftermath of operations such as those in Iraq, attention invariably focuses on the proper role of the AH-64 Apache attack helicopter, the benefits of night operations, aircraft survivability and the extent to which joint CAS can supplement army artillery. There is, however, less engagement with the transferability of Iraq's lessons to other regions, and to the probability that the West's technological superiority will not ensure urban success because its enemies need only avoid defeat. In other words, the typical use of air assets in urban operations is unlikely to change dramatically as a result of operational factors for the foreseeable future. This generalisation can be investigated by looking at how best to use air assets in cities.

Using airpower

In 1999 the advocates of airpower made much of NATO's ability to use precision-guided munitions to destroy specific buildings in Belgrade; airpower appeared to project force rapidly, selectively and with less risk than land power. By the time of the Iraq war four years later, tactical urban CAS had become a reality, with strike aircraft, armed with a variety of munitions and operating around the clock in 'kill boxes' over Baghdad, producing precise effects rather than generalised destruction. Advances in precision

airpower allowed coalition forces to keep civilian casualty figures and collateral damage at a remarkable low level in historical terms. Not surprisingly, many policy makers conclude that airpower offers a relatively bloodless military option. But there has never been consensus concerning the utility of airpower in cities. The opinion of the commanding officer of the Gordon Highlanders, who fought their way across Europe in 1944, represents one extreme:

> from our experience in clearing a town that has not been bombed to one that has been heavily bombed, there is little doubt that the infantryman would ask the airman to go elsewhere, particularly as he does not kill or even frighten the defenders the infantryman is going to meet.[20]

Critics such as Mary Kaldor offer another perspective. She argues that 'spectacular aerial bombing' is today's preferred technique of warfare but that it reproduces 'the appearance of classical war for public consumption and … has very little to do with reality on the ground'.[21] Against such judgements may be set those of the US Marines who welcomed its heavy firepower during the battle for Hue. German forces in the Second World War appreciated its morale-raising effects too. More recently, attack helicopters were the only fire support element available in Mogadishu. Each of these views reflects legitimate aspects of urban operations, but they do not add up to a coherent challenge to the land-focused consensus.

The answers to too many important questions concerning the use of airpower in urban operations remain missing. What does the indirect approach mean for the application of airpower in cities? What are the likely airpower roles and missions? What is the best balance between ground forces armed with tactical air support, and airpower with its longer-range capabilities? To what extent can air-based surveillance substitute for troops on the ground? What can Western forces do today in terms of doctrine, technology and training? And what will be needed tomorrow? The answers are likely to be complex, not least because technological advances fuel defence spending and doctrinal development is tightly linked to vested interests. Indeed, there is little incentive for the proponents of airpower to engage with such challenges.

For urban operations, joint or otherwise, undermine the centrality of airpower, which founded its original claims to independence on the basis that it made a unique and vital contribution (through strategic bombing) to war. This is not the case in cities, and technological developments will not reverse matters. Technology is more likely to enhance the role of unmanned vehicles, and smart missiles could give land forces the capability to strike at strategic centres without requiring an independent airforce.

Limitations of airpower

Much of the confusion surrounding the use of airpower results from the continuing gap between the technical possibilities, what is expected of it, and the realities of urban terrain.

The potential value of airpower's competencies in urban operations is not at issue. Projection, responsiveness, manoeuvre and situation awareness are clearly useful attributes, and precision munitions are undoubtedly an efficient way to strike point targets. But equally clearly, cities render many of airpower's attributes irrelevant. The use of airpower is constrained by high-rise buildings, especially when surrounded by mountainous terrain.[22] Electronic signals are deluded by masking, while inner-city air currents limit helicopter operations. And the use of aircraft in urban terrain is invariably hampered by factors such as:

- challenges of CAS and air interdiction (fratricide, enemy identification, collateral damage, terminal attack control) in confined spaces;
- urban air navigation challenges;
- flight hazards such as high-density wires, antennas and other obstructions;
- difficulties in achieving undetected ingress;
- effect of urban light levels on aircraft night-optical devices;
- increased threats to flight, including high-density small-arms fire;
- challenges of urban personnel recovery;
- tactical problems of landing zones and troops fast-roping down to the ground;
- rotary-wing aircraft vulnerabilities in confined spaces, such as between buildings and power lines.[23]

Aircraft remain highly vulnerable to shoulder-fired infrared missiles. Heat-seeking anti-aircraft missiles such as man-portable air defence systems (MANPADS) are difficult to counter because they are highly mobile and hard to detect on the ground. These relatively cheap surface-to-air weapons remain effective against all combat and civil aircraft (especially transports and helicopters) flying relatively slowly at low altitudes. Threats from MANPADS and anti-aircraft missiles forced US and coalition aircraft to operate at altitudes above 5,000 metres during the air war in the Balkans, which suggests their direct contribution to urban operations would be limited.[24]

These considerations mean that the expectations placed on airpower in urban operations are often unrealistic. The airpower historian Richard Hallion, for instance, has argued:

> In the wars of tomorrow, a new paradigm for military force will predominate, not the old infantry-armor team. Except for a few scenarios, the need (as opposed to the ability or the desire) to commit friendly ground forces to close combat with an enemy simply will not exist. Air weaponry – such as battlefield missiles, attack helicopters, fixed-wing aerial attackers, and remotely launched cruise missiles – will not only suffice but will be the most desirable means of confronting an enemy.[25]

Hallion may be right, such weaponry is undoubtedly desirable; but, equally, he may mislead if one of those 'few scenarios' proves crucial or if one of the aspects of airpower he mentions is insufficient or unacceptable. Take the case of fixed-wing aircraft and helicopters. The Russians used many fixed-wing aircraft to provide support while artillery was moved into range in Grozny during the recent wars in Chechnya. But although air bombardment, in conjunction with artillery, was effective at inflicting destruction or punishment, neither brought the war to a conclusion. Fixed-wing aircraft were only of real value in attacking targets outside Grozny, and attack fighter-bombers were most efficient only in large free-fire zones outside the city. More importantly, the nature of the terrain and of the enemy and their fighting methods meant that air strikes could not be targeted precisely.

Hallion's argument is stronger in relation to Russian use of helicopter gunships, which were notably used against snipers and weapons on upper floors in the 1994–96 war. There are also claims that a small number of Russia's newest attack helicopters, the Ka-50 or Hokum-A, are to form part of an experimental combat unit. Even so, helicopters still had precarious flights to and from the engagement area. And the fact that Black Hawk helicopters were brought down in Mogadishu by ingeniously adapted RPGs cannot be lightly dismissed. The US OH-58 and AH-1 Cobra helicopters in Somalia were admittedly superbly responsive, while the United States Air Force (USAF) AC-130 Specter gunships provided excellent support to ground forces too. But terrain matters. The infrared searchlights of the AC-130s may have allowed the rapid search of fields of fire around bases in Somalia but this is not the role envisaged by airpower's proponents; searchlights were not, in any case, found to be particularly useful in north-west Europe in 1945, and are unlikely to have great utility in a sprawling industrialised city such as Grozny. Each operation is, of course, unique, but airpower's role across the years is consistently tactical in emphasis.

Typical uses of air assets

As these examples suggest, airpower is most typically used in a multiplicity of supportive or enabling roles that include CAS, precision, intimidation and humanitarian relief. And CAS airpower acts as a useful force multiplier when (as in Mogadishu) ROE restrict the use of mortars and other indirect means of fire. Both fixed-wing and rotary-wing aircraft were used to intimidate targets in the Former Republic of Yugoslavia, while Operation Provide Promise (1992–95) provided an airlift/drop of humanitarian relief supplies into Sarajevo and other key cities for four years.

The potential mix of roles in a city can be seen from battles, such as that for Sidon in 1982 as well as those in Grozny in the 1990s and Jenin in 2002. In 1982, airpower provided cover for amphibious landings and bombed selected targets before the IDF entered Sidon.[26] It destroyed strong points and demoralised PLO leaders in refugee camps outside the city. It provided CAS during battles and cover over the city against Syrian fighters.

Helicopters moved troops and equipment when bottlenecks developed on the ground, evacuated wounded, and dropped psychological warfare leaflets. But the IDF made virtually no use of helicopter gunships as such because it was thought they were too vulnerable to ground fire and anti-aircraft weapons – an opinion later shared by Russian forces.[27] Airpower played a similarly supportive role in Moscow's second Chechen war. Russian operations used fixed-wing aircraft and attack helicopters, in addition to towed and self-propelled artillery systems, in an attempt to avoid close combat. The tactics appear to have paid off because sniper bullets fired from up to a mile away caused most Russian casualties. Russia's experience also suggests that, while airpower is very useful at softening opposition, especially outside cities, it cannot make a decisive contribution to the successful conclusion of war involving extensive and aggressive street fighting. Against this must be placed the IDF's experience in Jenin. Helicopters were judged to be good for transport and to clear roofs once troops had moved in. But they were also thought to be vulnerable, of limited value in fire support, and not as useful as tanks:

> A tank is always better, more accurate and far more effective … Basically a helicopter is good as long as it's moving. Rapid insertion, hunting down groups of gunmen, some light fire support. If they start hovering around the same place for too long, they become targets.[28]

Airpower's role within cities could expand if the tighter integration of air and land operations seen in Iraq creates a new air–land dynamic. Indeed, some advocates of transformation argue that operational analysis will reveal that such a development occurred: a combination of sensors and good intelligence, disseminated through a robust networking system yielded the critical factor of speed that enabled the seamless meshing of air and land resources in overcoming Iraqi countermeasures.[29] Alternatively, airpower could play a stronger part in joint and combined operations if industry promises can be delivered: if overhead three-dimensional imagery systems developed for ISR can detect underground bunkers and weapons sites, if UAVs can track friendly forces, or if Predator imagery can be combined

with a joint surveillance target attack radar system (JSTARS) platform. The US Air Force UAV Battlelab is accordingly refining the operational concepts that allow Predator UAV sensors to overlay real-time video onto highly accurate satellite imagery provided by high-resolution systems. The US Marine light/attack helicopter attack squadron (HMLA), meanwhile, claims to be uniquely suited to accomplish all six functions of Marine aviation in a complex urban war: precision fire, medical evacuation, command and control, confined area insertion and extraction, forward reconnaissance and escort. Yet the emphasis remains on airpower responding to requests for precision fire, escort, evacuation and so on, even though it is likely that airpower needs to be exercised as a whole for the medium to be fully exploited. This suggests that the typical use of air assets in urban operations – and the existing air–surface balance – is unlikely to radically change as a result of technological or operational factors in the near future.

Multinational Urban Operations

The role of technology cannot be considered in isolation, for the way war is made has as much to do with politics as technology. Political decisions sanction technological choice, guide its application, and, increasingly, technology reflects political relationships as often as political relationships determine the technology available. The widening gap between the technological resources of US forces and those of its would-be allies is a case in point. This may not matter when the allies concerned are content to take a secondary part, or play a niche or symbolic role. Indeed, it was US operations in the aftermath of 11 September 2001 that introduced the phrase 'coalition of the willing', reflecting the fact that the USA needed allies for political rather than military purposes. Defense Secretary Rumsfeld told NATO ministers in December 2001 that 'I really believe that the mission determines the coalition, and the coalition does not determine the mission.'[30] 'Multinational', 'coalition' and 'alliance' – all are effectively interchangeable, their use reflecting specific context rather than fundamental differences. In US understanding, multinational is formally defined as a collective term describing military actions

by forces of two or more nations, typically organised as a coalition or alliance. In UK terms multinational could refer to NATO, UN or even European operations, or it could involve forces from nations outside such familiar and long-standing alliance structures. In practice it appears to depend on the type of operation involved. Although the British government does not rule out the potential for unilateral action it is understood that the UK will act as a member of a coalition force in any warfighting operation, which effectively means a US-led operation.

It would be short-sighted to consider the impact of technology on urban operations primarily in the light of the US–UK's working relationship during, for example, the war in Iraq. The strong trend for Western forces to operate in alliances and the probable incidence of future operations indicate that the role of technology should be placed in the wider context of multinational operations. Past experience of such operations introduces a worrying note, for, although the potential political and military advantages of coalitions are generally considered to outweigh technological, doctrinal, cultural and language difficulties that are obstacles to co-operation, let alone co-ordination, unanticipated misunderstandings are common. Two anecdotes illustrate the tactical challenges and their potentially strategic implications. Some of the Americans travelling through Mogadishu on 3 October 1993 were passengers in German vehicles (Condors) with Malaysian drivers, turret controllers and gunners. None of the Americans had seen a Condor before so their first problem was opening the doors. They soon confronted a more urgent problem: how to communicate with non-English speakers in the middle of a battle when no interpreters were available.[31] And too many multinational operations are ineffective. As an experienced UN peacekeeper in Kosovo replied when asked why UN missions go so wrong: 'No clear sense of purpose; muddled and contradictory goals and objectives crafted by amateurs, implemented by incompetents and defended by bureaucrats whose sole purpose in life is to move up the food chain … Appearance is everything; nevermind the substance.'[32]

Multinational campaign planning is complex, success is difficult to define, and the ways and means to achieve it are often unbalanced regardless of the technologies or environment involved. Crisis response takes longer to package, decision-making processes

are slower and more vulnerable to manipulation, and ROE are affected by public opinion across the partners, one of whom invariably dominates. Reconciling a multinational force's political commitments with its military capabilities and technological resources is sometimes as much a problem as developing the directives delineating the degree of authority to be exercised by the multinational commander, or the classification and release of intelligence. More seriously, tensions arising between the technologies available to multinational contingents can reflect fundamental disparities in norms and objectives. Approaches to non-combatant control or to the USA differ. During operations in Iraq in early April 2003, for example, UK news reports noted that senior British officers were 'appalled' by the 'brutal tactics' US forces routinely employed in Nasiriya.[33] It was thought that US troops relied on technology to the exclusion of the military skills associated with winning 'hearts and minds'. Or compare the current British approach of defining security in terms of impartiality, minimum force and the effects of such policies on all groups, with that of states such as Turkey, which emphasise political security at the expense of individual security. France, meanwhile, does not share the UK's deference to the USA. Consider too the row about the US treatment of al-Qaeda fighters in the Guantanamo Bay prison in 2002, which laid bare a representative cross-section of the tensions that dog relations between the USA and its allies. The US attitude seemingly reflected a cavalier approach towards international treaties and impatience at the constraints of collective security. There is also a feeling among the USA's allies that the extreme security-first approach displayed in Guantanamo Bay was symptomatic of the USA's exclusive focus on the safety of its soldiers at the expense of anyone who might get in their way. Such distrust is obstructive in peacekeeping and potentially critical in war. It matters because, although the USA may no longer need allies in order to conduct successful operations, it needs allies on whom to delegate the stabilisation or security programmes that will follow most urban operations. In May 2003, for instance, 14 or 15 countries were reportedly discussing contributions to a stabilisation force for Iraq.

Many of the problems indicated here are common to all coalitions, and exist regardless of the technologies available, but

multinational urban operations may represent more than the sum of acknowledged problems. Not only will technological, doctrinal, cultural and language differences accentuate existing problems, especially those associated with operational capabilities and command styles, but it is likely that cities will themselves generate unexpected consequences that could endanger policy goals. The risk is accentuated by the evolutionary and reactive nature of much policy making. The gaps between political legitimacy (which coalition partners usually add) and enhanced capability (from which they sometimes subtract) need careful management. The UN operation in Mogadishu 1993 vividly illustrates the difficulties inherent in multinational urban operations with multiple and seemingly contradictory objectives. The military factors shaping the operation had less to do with the technology available than with political constraints connected to avoiding American casualties. The inherent weakness of politicised operations composed of forces as disparate as those of the USA, Italy, Malaysia and Pakistan played a part too. There was no standard equipment, unified doctrine, or standard operating procedures; national checks and goals blocked orders; and the urban environment magnified all such problems. Forces were fragmented by the political and military need to confine units to specific geographical areas; disarmament and weapons screening programmes were inconsistent; and different contingents had different ROE. Complex command and control arrangements often delayed communications between coalition forces, with the Italian commander, for example, waiting to receive approval from Rome before acceding to the US Joint Force commander's request for armoured assistance. That the operation occurred in a densely populated city without a coherent infrastructure exacerbated the human problems associated with coalitions.

Technology's Supporting Role

The way war is made relies heavily on the technological resources (which here includes airpower) available, while the way in which available or acceptable technologies are used depends on the political and military challenges associated with specific operations or environments. Thus recent operations in Afghanistan

and Iraq suggest that what makes the USA so powerful is the technology that gives it information: global positioning systems (GPS), laser guidance, detailed maps, radar, JSTARA (the E-8C Joint Surveillance Target Attack Radar System aircraft), moving-target indicators and the ability to receive and view data in real time across the warfighting spectrum. The fear that operations in Iraq would degenerate into costly street fighting encouraged the successful exploitation of sophisticated technologies to offset Iraqi advantages. But such reliance brings its own vulnerabilities. It may even be inappropriate in some cities, given the short-range, multidimensional challenges of urban terrain; digitised equipment such as GPS-based weapons, sensors and computer-based ground pictures may show units in the same location even though several dozen floors of reinforced concrete separate them.[34] Sophisticated communications and short-range ISTAR are undoubtedly significant enablers, but technology has its limits, especially in urban war. Indeed the most useful weapons on urban terrain probably remain the Second World War-era flame throwers and tank demolition guns that were withdrawn from many Western forces some years ago. Further, although advances in precision weapons and electronics drive defence spending it has been argued that traditional technology – armour and artillery – remains potentially more important: 'What was interesting [in Iraq] was how little was new.'[35]

Similar considerations apply to the use of airpower, which epitomises technological promise. Airpower is constrained by the political objectives and values shaping contemporary operations. It will remain attractive to planners because it played a critical role in every aspect of the war in Iraq (where its use vindicated the Pentagon's advocacy of transformation and a new kind of war), and because of continuing political pressures for quick or cheap solutions to difficult security policy problems. Air dominance was achieved in Iraq, but the extent to which such superiority can be achieved against cities in other regions is unclear; so too is the degree to which advanced land-based air defence systems like the Russian S-300 can equalise the benefits of US airpower. And air strikes are not effective at coercing cities. Fixed-wing aircraft are best at attacking or providing support outside cities though helicopter gunships, suppressive fire and CAS are potentially more valuable within them. It is true that smart

munitions, stealth aircraft and advanced satellite systems may provide great opportunities but many urban scenarios limit their applicability. *British Air Power Doctrine*'s comment regarding war in non-industrialised states is apposite: 'airpower remains highly relevant, but air operations ... may cascade to other platforms such as attack helicopters or support helicopters used to deploy Special Forces'.[36] More importantly, airpower's ability to affect what happens on the ground is limited to support; only ground forces can occupy, hold and control territory. Not surprisingly, tensions result from the continuing gap between the technical possibilities, what is expected of airpower, service interests and the realities of urban terrain.

Technology undoubtedly offers many promising areas for accelerating change or sparking innovation. More fundamentally, although the question of how best to use technology – and air assets – in future operations remains open, the inescapable fact remains that urban terrain tends to negate technological advantage. In other words, the West's technological superiority will not ensure success because its enemies need only avoid defeat. The value of a $2 billion stealth bomber and precision-guided munitions against an enemy that presents no material target is low. Netcentric warfare and a short-duration sensor-to-shooter loop may be of incalculable value in future counterinsurgency campaigns, but the Clausewitzian imperatives of fog and friction retain validity:[37] faulty intelligence, bad weather, miscommunication, human imperfections, unexpected behaviour by adversaries, human shields, events – all can negate technological advantage. And such obstructive factors are often accentuated by the multinational nature of contemporary operations. This is likely to remain a problem for the foreseeable future, regardless of the USA's recent redrafting of the rules of coalition warfare. For such reasons technological development is not synonymous with capabilities and is better regarded as a support or enabler than a lead. Similarly the role of tactical strike aircraft (perhaps tied to unmanned sensor assets), high-precision weapons and helicopters is likely to remain supportive and enabling, rather than decisive or strategic, because success in cities will continue to demand a physical ground presence which airpower cannot provide. There is as yet no evidence that technology has or can cause a fundamental shift in the nature or conduct of urban operations.

Notes

1. The success of the air campaign during the Gulf War arguably rested as much on organisational innovations in command and control as on technology. See E. Cohen, 'The Mystique of US Air Power', *Foreign Affairs*, 73, 1 (1994), pp. 116–18.
2. The Global Hawk flies at 20,000 metres. Images gathered by Predators were collected into the weapons control cabin of AC-130 gunships and fed to the White House. Joint direct attack munitions (JDAMS), which cost about $21,000 in 2002, had a similar innovatory effect. Attached to simple gravity bombs, they turn them into satellite-guided weapons capable of falling within 10 metres of their target. They are, however, ineffective against moving targets.
3. Jary and Carbuncle, 'In the Jungle of the Cities', *British Army Review*, 121 (April 1999), pp. 61–8.
4. That they can is the basic premise of R. Hahn and B. Jezior, 'Urban Warfare and the Urban Warfighter of 2025', *Parameters* (Summer 1999), pp. 74–86. Hahn and Jezior argue that while soldiers will continue to be the most important element in urban operations, 'we must radically change the way they fight'. Compare Coker's argument that tomorrow's combatants will be technicians or even machines. See C. Coker, *Waging War without Warriors? The Changing Culture of Military Conflict* (Boulder, CO: Lynne Rienner, 2002).
5. Jary and Carbuncle, 'In the Jungle of the Cities', p. 61.
6. R. Glenn, R. Steeb and J. Matsumura, *Corralling the Trojan Horse: A Proposal for Improving US Urban Operations Preparedness in the Period 2000–2025* (Santa Monica, CA: RAND Arroyo Center, 2001), p. 23.
7. Personal communications, W. Hurley, December 2001; D. Gleeson, January 2002. Compare J. Roos, 'Hunter-Killer UGVs: Battlefield Robots are within Reach', *Armed Forces Journal International* (January 2002), pp. 28–31; N. Fiorenza, 'Eurobots: Robotic Niches in Europeans' Sights', *Armed Forces Journal International* (January 2002), pp. 34–7.
8. Thomas points out that information superiority, for instance, is a capability, not a proven condition. In spite of impressive information superiority during the Kosovo war, NATO did not know how many tanks and armoured personnel carriers it destroyed. It could not predict President Milosevic's response to its technological superiority even though it had almost perfect intelligence about his intentions. See T. Thomas, 'Kosovo and the Current Myth of Information Superiority', *Parameters* (Spring 2000), pp. 13–29.
9. 'MIT comes to Washington's defence', *Financial Times*, 25 March 2002. The US Army Future Warrior 2025 project identifies the need for a flameproof system, with sensors to monitor the soldier's

physical and mental status, and a microclimate with heating and cooling systems. The UK Future Integrated Soldier Technology (FIST) programme reflects similar requirements.

10. C. Grant, 'Phantom Future', *Defence Review* (Autumn 2001), p. 23.
11. For details of FIST see J. Ashton, 'Mailed Fist: The UK's Progress in Soldier Modernisation', *Defence Review* (Autumn 2001), pp. 29–30. The system will probably be made simpler and more robust in the light of the Iraq war.
12. Close operations probably 'remain inevitable and may well be where the decisive action takes place'. Grant, 'Phantom Future', p. 23.
13. Compare A. Jalali, 'Afghanistan: The Anatomy of an Ongoing Conflict', *Parameters* (Spring 2001), pp. 85–98. Technological might is not always necessary to achieve success, as the fall of the fort of Mazar-i-Sharif showed in 2001. Taliban fighters surrendered after six days of bombardment only when freezing water was poured into their hiding place.
14. The development of RPGs is discussed in S. Janzen, 'The Story of the Rocket Propelled Grenade', *Red Thrust Star* (April 1997), pp. 21–5; L. Grau, 'A Weapon for All Seasons: The Old but Effective RPG-7 Promises to Haunt the Battlefields of Tomorrow' (call.army.mil/call/fmso/fmsopubs/issues/weapon.htm).
15. See J. Hutton, 'Use of Mortars in Military Operations on Urbanised Terrain (MOUT): A Review of Doctrinal and Associated Literature' (call.army.mil/products/trngqtr/tq4-99/mortars).
16. See A. Lieven, 'Lessons of the War in Chechnya, 1994–96', in M. Desch (ed.), *Soldiers in Cities: Military Operations on Urban Terrain* (Carlisle, PA: Strategic Studies Institute, US Army War College, 2001), p. 64. Contrast the pro-technology perspective of F. Akers and G. Singleton, *Task Force Ranger: A Case Study Examining the Application of Advanced Technologies in Modern Urban Warfare* (Oakridge, TN: National Security Program Office, 2000).
17. This is the USMC approach. The MCWL takes an operational or tactical concept and deduces the required capabilities, which lead to supporting technologies. Technology can also have unsuspected organisational effects. A US General Accounting Office report (released in 2000) found that too great a focus on tactical level systems could exclude mid-level commanders, thus inadvertently transferring decision making.
18. The Iraq war validated the use of airpower *and* the importance of a large invasion army. See 'Lessons from the Iraq War: Strategy and Planning', *Strategic Comments* 9, 3 (2003). It remains questionable whether the deployment of space weapons will directly affect urban operations, not least because low earth orbital space power is not territorial in the sense that airpower is. See K. Mueller, 'Space Weapons and US Security: The Dangers of Fortifying the High Frontier', unpublished paper, ISA annual convention, New Orleans, 2002.

19. See Directorate of Air Staff, MoD, *AP 3000: British Air Power Doctrine*, 3rd edn (1999).
20. M. Dewar, *War in the Streets: The Story of Urban Combat from Calais to Khafji* (London: BCA, 1992), p. 42.
21. M. Kaldor, *New and Old Wars: Organised Violence in a Global Era* (London: Polity Press, 1999), p. 3. Government secrecy often makes it difficult to evaluate the success or otherwise of airpower in achieving its objectives. It is, for example, impossible to gauge how well the USAF has done in Afghanistan. Even so it will probably be the winner in the budgetary process on the basis that Navy, Special Operations forces, Army and Marine troops were all there to serve an airpower strategy. See W. Arkin, 'Rumsfeld's year in review', *Washington Post*, 28 January 2002.
22. An interesting example of this is to be found in the Soviet campaign in Afghanistan. Airpower's contribution to the war was crucial; fixed-wing operations carried out most of the operations designed to destroy Afghan society, bombings and strikes, while helicopters contributed to many successful tactical ground operations. But the closeness of mountains to all major cities allowed the mujahidin to approach within mortar and rocket range at night. This meant that the Soviet Army never solved the problem of urban security.
23. Taken from the holding publication Joint Staff, *Handbook for Joint Urban Operations* (Washington, DC: 2000), p. III-6. The section was not included in the *Handbook*'s successor, Joint Publication (JP) 3-06, *Doctrine for Joint Urban Operations* (Washington, DC: 2002).
24. See G. Goodman, 'Counter-SAM Tactics: After 30 years, Shoulder-fired IR Missiles Still a Threat to US Aircraft', *Armed Forces Journal International* (November 2001), pp. 52–5.
25. R. Hallion, 'Airpower and the Changing Nature of Warfare', *Joint Forces Quarterly* (Autumn–Winter 1997–98), p. 46.
26. See J. Leaf, 'MOUT and the 1982 Lebanon Campaign: The Israeli approach', *Armor* (July–August 2000), pp. 8–11.
27. In a novel twist on airpower, both the IDF and PLO found air defence guns a useful means for suppressing ground targets. The IDF's M163 Vulcan 20mm anti-aircraft guns proved very useful in urban settings because they had sufficiently high elevation to target the upper stories of buildings; their high rate of fire suppressed snipers and intimidated their adversaries.
28. 'OPERATION JENIN: Israeli Officer's view'. Personal communication, M. Ley, 20 August 2002.
29. The Department of Defense Office of Force Transformation expects this to be the case. See K. Burger, N. Cook, A. Koch and M. Sirak, 'Analysis: Iraq. What went right?', *Jane's Defence Weekly*, 30 April 2003, pp. 20–5. See also M. Knights, 'Iraq Analysis: "Iraqi Freedom" Displays the Transformation of US Air Power', *Jane's Intelligence Review* (May 2003), pp. 16–19.

30. A partial list of the support the USA received from its coalition partners in 2002 can be found in DoD *Fact Sheet, February 27, 2002: International Contributions to the War against Terrorism*. It includes 28 countries, ranging from Australia to Uzbekistan.
31. M. Hollis, 'Platoon under Fire: Mogadishu, October 1993', *Infantry*, 88, 1 (1998), pp. 27–34.
32. Quoted in L. Abdela, 'Call to abandon arms', *The Guardian*, 5 August 2000.
33. For example, 'Allies divided over battle for hearts and minds', *The Guardian*, 1 April 2003.
34. See S. Edwards, *Freeing Mercury's Wings: Improving Tactical Communications in Cities* (Santa Monica, CA: RAND Arroyo Center, 2001).
35. Quoted in D. Mulholland, 'Who will profit from war in Iraq?', *Jane's Defence Weekly*, 23 April 2003.
36. *AP 3000: British Air Power Doctrine*, p. 2-6-9.
37. Clausewitz never refers to city operations though his views may be extrapolated. For example, he identifies reasons why an army may enter a city. In book 6, chapter 10 he discusses the subject of fortresses and the way in which they support defence. In book 7 he addresses attacking entrenched camps. And in book 7, chapter 15 he considers attacking to seize an enemy's capital, arguing that the attacker's first objective is not the city but the enemy's lines of communication running from its army to the capital. See C. von Clausewitz, *On War* (Princeton, NJ: Princeton University Press, 1976), pp. 263–70, 393–400, 536, 545–7.

PART II: Wasteland

4 Policing

Three archetypical operations are the subject of the next three chapters: policing during low-level operations, enforcement in mid-level operations, and warfighting. Each term catches aspects of urban operations and is a reference point for urban operations and contemporary conflict.

Although warfighting capabilities drive the development of urban operations, non-warfighting low-level operations are more typical in cities, with most operations concerning the enforcement or maintenance of order or public safety in fragile urban societies.[1] In some circumstances military assets are even used to restore public-health infrastructure, but such tasks (which are poorly covered in current doctrine) are nearer to those of an occupying power and are not addressed here. The control of civilians is, however, a pervasive theme across all operations, regardless of whether they concern conflict prevention, stabilisation, counter-terrorism, or security assistance.[2] It is usually understood in terms of policing and, as such, is the subject of this chapter.

The terms policing, counterterrorism and counterinsurgency (COIN) deserves some explanation in this context. 'Policing' is normally used in a broad descriptive sense, but certain distinctions are needed. One very important distinction concerns what official police forces (as opposed to the military) are required to do. This is police work and should be separate from what the military do. The international police in Kosovo, for example, dealt with

individual crimes, traffic control, small-scale disturbances and the formation of a civil police. The more general activity of policing refers to problem-solving activities associated with the imposition and maintenance of order and public safety, and is backed by military capabilities (albeit constrained by strict rules of engagement – ROE). In Kosovo, NATO soldiers patrolled the streets, protected Serb pensioners, accompanied United Nations civilian police (UNCIVPOL) and apprehended war criminals. In Belfast, British forces maintained a visible patrolling presence, managed Apprentice Boys' parades, and implemented an intelligence network to identify terrorists. Such tasks engage directly with civilians, and rely on light infantry rather than armour or air-power, neither of which has great utility in such operations.[3] Whether the operations concerned are understood as 'counter-terrorism' or COIN matters from a legal and operational point of view, but most definitions remain controversial or ambiguous. In British terms counterterrorism is carried out under the direction of a civil authority and in accordance with domestic law, while COIN involves 'the use of military force designed to complement the political, economic, psychological and civic actions needed to defeat an armed insurgency'.[4] Terrorism remains understandable as premeditated politically or religiously motivated violence. It may even be an element of insurgency. For 'insurgency' describes the actions of a minority group in a state, that wants to force political change 'by means of a mixture of subversion, propaganda and military pressure ... Typically, the insurgent forces will seek to avoid conventional engagements between large forces while seeking the active support of the population at large. Such campaigns are likely to be protracted.'[5]

Categorisation matters to any proper understanding, and so is discussed here before the environment of low-level operations and the reasons for military involvement in policing are addressed. The policing task in counterterrorism and peacekeeping is explored by reference to British forces in Northern Ireland and the Balkans. And the discussion concludes with a warning for liberal democracies: using the military to police cities is potentially dangerous. This is especially so in intelligence-based wars against an asymmetric enemy embedded in an urban population.

Categorising Operations

Categorisation is necessary for analytical, legal and operational reasons. Most categorisations are based on three types of action, with ascending reliance on military force; operations may support a population, stabilise a volatile situation or conduct combat. Typical approaches speak of policing (in peacekeeping), raids (as in non-combatant evacuation or the arrest of war criminals) and sustained combat.[6] An alternative is to use specific factors such as the scale of combat or the level of political constraint. Thus the 1993 US infantry manual FM 90-10-1 introduced precision and surgical MOUT to cover operations constrained by stringent ROE or reliant on Special Forces. Edwards uses this categorisation in his *Mars Unmasked* study, illustrating his choice with the Mogadishu firefight (October 1993), Operation Just Cause in Panama (1989) and the first battles for Grozny (1994–96).[7] No classification is perfect but policing, enforcement and warfighting are used here because they are sufficiently general to cover operations by most forces. They avoid raising unrealistic expectations – operations are rarely surgical or precise – and they shun intensity as a defining characteristic. This last reason is important because the notion of intensity is misleading; any operation may involve moments of great intensity. At the section level, for example, Belfast could be as intense, violent and dangerous as Beirut even if only for a fraction of the time; about once a month, patrols in Northern Ireland would, when pinned down by snipers, let off 500 rounds in an intense burst of firing.[8] Russian operations in Grozny in 1994–95 make the point more dramatically. They were low intensity in that they concerned military aid to the legitimate civil power in an internal conflict, but they were anything but low intensity in effect: in 1994–96, Grozny was destroyed by fuel-air explosives, multiple rocket launchers, Mi-24 Krokodil helicopter gunships and Su-25 ground attack aircraft.

In a sense, all attempts at categorisation are misleading because urban operations are inherently volatile. Indeed, this seems to one of their major characteristics. The 1994 operation in Grozny, for instance, was planned as a police operation **(**Chechnya had become a centre for drug and weapons trafficking) in which Ministry of Internal Affairs (MVD) troops played the

main role. Even Russian Interior Ministry officers described the operation as an example of a force designed for low-intensity internal operations 'trading up'. But at the same time it is necessary to retain analytical and operational distinctions between types of operations so as to avoid under- or over-reaction. It is also required because it provides legal and operational indicators, and because transitioning between the various phases presents tactical problems, often with potentially strategic implications. This is especially likely when forces are sequentially or simultaneously feeding the local population, keeping rival factions apart, and fighting, all within a confined area.

The well known US Marine Corps (USMC) phrase 'three block war' encapsulates the problem:

> In one moment in time, [USMC] members will be feeding and clothing displaced refugees – providing humanitarian assistance. In the next moment, they will be holding two warring tribes apart – conducting peacekeeping operations. Finally, they will be fighting a highly lethal mid-intensity battle. All on the same day, all within three city blocks. It will be what we call the three block war.[9]

It should be noted that the three-block war does not refer to blocks of buildings or the physical structure of a city. What is more, there is no attendant three-block concept. At some point in 1997 a speechwriter for General Krulak, commandant of the USMC, coined the phrase, which captured imaginations. It was never viewed as an operational concept but was rather a means of explaining to the public how Marines might find themselves engaged overseas.[10] That said, the USMC recognised the necessity to be able to operate effectively in each role, to recognise when transition from one role to another was necessary, and to be able to make the adjustment, mentally and physically. The three-block notion was its attempt to come to terms with amorphous conflicts in which forces may be confronted by the entire spectrum of tactical challenges in the span of a few hours and within the space of a few contiguous blocks. It resonated with other forces because it acknowledged that operations tend to degenerate into a series of small group actions, often becoming intensive, as opposed to intense. And it emphasised that recognition of the

indicators that signal transition is what really matters. In practice, recognition relies on skills learned on the job or during relevant training; experience is more important than doctrinal innovation and technological development.[11] Nowhere is this more evident than in the policing of fragile urban societies.

Environmental Challenges

The policing of such societies tends to be frustrating, squalid, ambiguous and politicised. It is all too often a tedious grind of patrols, searches, raids and checks. And its incidence could increase, especially in the developing world. Small slums provided terrorists with a perfect environment in Aden in the mid-1960s – straggling shanty towns of 'kutcha huts' made concealment easy – and will no doubt fulfil the same purpose in the future. As British forces discovered in Aden, slums and townships may be easy to seal off but their control is another matter; it is difficult to track terrorists in a maze of alleys, shacks and shops.[12] Western forces could, for example, be tasked to assist governments and their paramilitary forces in normalising order following long-term internal unrest. The winding alleys of Nairobi's Kibera slum, where 600,000 people live, illustrate the types of slum in which operations could take place. During recent clashes between ethnic Luos and Nubians, police carrying guns and sticks (and sometimes engaging in looting) combed Kibera while gangs armed with machetes roamed, sporadically fighting and looting.[13] Countless properties were burnt and thousands of inhabitants fled towards the outskirts of the sprawling settlement where a clear line divided the relatively squalid mud houses of poorer tenants from the brick houses of the prosperous. The political sensitivities involved are indicated by the fact that President Moi lives on Kibera's outskirts. The potential density of population involved is evident from the extreme example of the largest slum in the world's most crowded large-scale conurbation, Cairo, where half a million people live on 350 hectares. Like many such slums it has electricity and telephones – and frequent sewage floods.

Operating in this environment will be difficult for a number of reasons. At the strategic level global inequality and the

concentrations of extreme poverty in the developing world could result in the acute politicisation of operations.[14] At the operational level American distaste for anything resembling nation building or peacekeeping complicates life for its allies, while its use of proxies makes coalition operations vulnerable to capture by regional interests. Each operation will present a mixture of new and old challenges at the tactical level, and each response will be based on experience and adaptation. Technological developments will be leveraged wherever possible but the nature of low-level operations usually obstructs the application of all but low-level technology. In Haiti and Bosnia (as in Aachen in 1945) this meant that it was the brakes, springs and suspension of armoured vehicles that demanded attention; glass, metal, sharp-edged concrete and rubbish ensured that tyres were a major problem.[15] In Somalia and Belfast simple wire and steel were used to reinforce vehicle windows so as to prevent penetration by grenades and rocks. Vehicles can move quickly but they are also noisy, alerting adversaries to their presence, and a group of soldiers in the back of a vehicle makes an attractive target. Moving undetected at night may be nearly impossible. In Haiti people slept and had parties in the streets, while in the villages all the dogs howled. In fact many of the most violent acts occurred during the day, when large groups of Haitians gathered at the markets or for political rallies; the streets were crowded with people, dogs and livestock – and so the constraints on US troops were stringent.

And, despite the manoeuvrist approach's dedication to shaping adversaries decision-making processes, we know little about the thinking of such societies. Western notions of urban operations may collide with those of other cultures. During the 1992 Rwandan massacres, for example, Kigali was controlled by murder. The British journalist Mark Huband describes the silent streets, the fear of Tutsis waiting for gendarmes to take them, the business-like atmosphere of the infamous radio station Libre des Mille Collines, the blank stares of the soldiers guarding it, and the checkpoints manned by boys drinking beer, with stick grenades in their belts.[16] This raises significant questions about the nature of urban operations in the developing world to which we do not know the answer. General Aideed probably regarded operations in Mogadishu as significantly different to those in Baidoa, just as Charles Taylor or Prince Johnson regarded operations in

Monrovia, the capital city of Liberia, as qualitatively different to those in the towns of the north. But the point is that little is known about the way such men think. Ironically, their tactics often mirror those of manoeuvrism; force is applied precisely against points of weakness and the enemy is defeated by the destruction of his will to continue. The relevance of Western manoeuvrist doctrine to such circumstances is not immediately obvious.

The Military Task

The societies in which expeditionary operations occur are often lawless. Military activity is intended to control or prevent conflict rather than the crime that prompts, fuels or reflects it, but the lack of an effective justice system means that soldiers often have to police. Thus British paratroopers stepped up 24-hour street patrols in Pristina, Kosovo, in June 1999 after the bodies of 14 victims of revenge attacks were found, 48,000 refugees entered the city on one day, and looters stormed city shops 100 yards from the UN HQ.[17] Nevertheless, responding involves patrolling, security assistance and riot control or public order, rather than conventional police work. And it relies on specific training and experience.

Patrolling is the most characteristic activity, especially for British forces which consider a visible presence essential. British patrolling systems, typically those of multiple patrols, are based on experience from Northern Ireland. They rely on a spherical, rather than linear, patrol. Instead of a squad or platoon moving along a single street or using a fixed formation, multiple patrolling consists of a system of satellite supporting teams moving around the primary (infantry fire) team. The USMC has also successfully experimented with multiple patrolling though most US forces adopt more conventional formations that provide greater force protection. The patrolling methods of a team of US military police integrated into an Iraqi police station in eastern Baghdad in 2003, for example, relied on forays by armoured Humvee vehicles equipped with heavy machine guns and grenade launchers. Many factors influence patrolling, including climate. Patrols in Aden in the 1960s lasted 90 minutes, this being the

maximum time it was thought men could stay fully alert. Sustaining alertness was even more of a problem for US forces carrying out anti-terrorist patrols in Bahrain after the bombing of the Khobar Towers in Dharam, Saudi Arabia – temperatures rose to more than 150°F.[18]

Security assistance to a legitimate government may complement patrolling. Both may be used, as in Kabul in 2002, to buy time and keep political processes open. Thus the purpose of the International Stabilisation and Assistance Force (ISAF – the formal task of which is enforcement) in Kabul was to reassure and build public confidence in the interim Afghan government rather than to keep the peace or provide security, which is an Afghan responsibility. Even so, the most effective response proved to be a programme of low-profile joint foot patrols with Afghan police, especially at night, rather than static observation, though the need to avoid the appearance of foreign occupation meant that only about 2,000 troops carried out patrols. Security assistance is not necessarily the same as creating a secure environment though both may be heavily politicised. The mandate of the US-led Unified Task Force (UNITAF) in Somalia, for example, was to 'create a secure environment for the delivery of humanitarian relief', but US Marines landed in Mogadishu as famine was abating so it was a straightforward task to declare victory over starvation.

Riots represent a fundamental urban challenge, regardless of whether the operations concerned are technically peacekeeping, humanitarian assistance or disaster relief – and, as Somalia showed, none of these tasks is necessarily non-political, let alone benign. Riots in the developing world tend to be massive, lethal, carefully organised by factional leaders, and involve large numbers of women and children. They often occur where there is no government or law able to deal with rioters or gunmen. The military, meanwhile, are usually restrained by principles of minimum force, and must apply military capabilities 'prudently' and with regard for collateral damage. Soldiers may have to use force or the threats of force to control riots but typically do not have weapons systems bridging the gap between minimal and lethal force.[19]

The scale of riots, often involving complex and entrenched animosities, occurring in peacetime indicates the potential problem.

The riots that broke out in Bombay for eight days in January 1993, for example, saw hundreds of deaths and extensive destruction.[20] The diffusion of violence was an important factor, spreading over the entire city. The authorities did not try to control the situation and the police did not fire on rioters and looters as they had on previous occasions, but control is difficult even in situations when they do. In 2002, thousands of military and police in India's riot-torn western state of Gujarat failed to bring under control the worst communal violence in a decade; more than 250 were killed in three days. In 1947, however, religious riots claimed almost a million lives in the wake of the partition of India that resulted in the creation of the Muslim nation of Pakistan. In other words, riots can form part of a complex cycle of violence and retribution that complicates military tasks. This is now evident in Nigeria, where the Nigerian Army is actively engaged in urban operations. Two examples suffice. Hundreds died during rioting in Kano City in the autumn of 2001. Several months later violence in Lagos, sub-Saharan Africa's biggest city, resulted in dozens of deaths. Gangs armed with knives, machetes and sticks moved around a crowded district that had just been destroyed by massive explosions at an army ammunition dump. Western forces have not handled such levels of violence for many years and the effectiveness of their response is difficult to predict.

Relevant experience

Despite the obvious differences of scale and culture between a Lagos and a Belfast, the British Army's approach to urban operations is especially relevant to low-level operations because it is based on hard-won street craft learned in the politicised environments of counterterrorism in Northern Ireland and peacekeeping in the Balkans. Although the counterterrorist campaign in Northern Ireland was fought mainly in rural areas, the high-profile battles between security forces and the Irish Republican Army (IRA) occurred in Belfast and Londonderry. Similarly, while much of Kosovo is rural, control of the city of Pristina (centre of the provincial government) and towns such as Mostar and Peć (the main centres of local government) were symbolically essential. They were also accessible to the press.[21]

The relevance of British experience in the European scenario to the wider world might be questioned – British military and police reporting and control structures differ from those used in most NATO states, let alone the developing world – yet their use is justifiable for a number of reasons. An army's view of its task is always influenced by recent operational experience, and many overseas forces have monitored British experience in Belfast. Second, many of the tactical lessons learned have general relevance across a range of cities and militaries, and the British Army's generalist tradition widens their appeal. Third, the challenges of conducting prolonged operations in volatile or criminalised environments (such as Northern Ireland and the Balkans) can only increase. And, lastly, while warfighting operations are most likely to occur in the developing world it is possible that similar operations will again occur within Europe.

Counterterrorism in Northern Ireland

The two most important lessons from British military experience in the cities and towns of Northern Ireland are, first, that experience, special training, self-discipline and human intelligence are more critical than doctrine or high technology.[22] Street craft was best enhanced by low technology, such as glass-reinforced plastic helmets with visors, and bulletproof vests. Second, although tactics are critical, successful urban operations also require appropriate political policies. This is especially so in cities where sectarian violence has a catalytic effect.

Substantial British deployment began in 1969 when the Army intervened to assist the civil authorities after the Royal Ulster Constabulary (RUC) was unable to maintain public order in the face of widespread sectarian rioting. The initial emphasis of Army operations was on reassuring the Catholic minority, though reassurance soon evolved into keeping the two communities apart – a wall of corrugated iron, barbed wire and lookout posts demarcated the boundaries between Protestant and Catholic areas. The Army's role changed as the situation developed. From 1969 to 1978 the Army had prime responsibility for security, which presented problems because soldiers had to make street arrests, set up checkpoints and disperse gatherings even though they did not have the necessary statutory authority. Even so, in

the two years between 1972 and May 1974, they reduced the level of urban violence to the point where the IRA had difficulty in operating in Northern Ireland and shifted to targeting mainland Britain and Europe. At that point the British government made serious efforts to criminalise paramilitary operations, with the police reasserting their primacy over security operations; paramilitaries were treated as violent criminals, and by the mid-1970s operations had evolved into a COIN-style counter-terrorism campaign (even if it was described in terms of internal security).[23] Operations were designed to be attritional and deter terrorists. Infantry tactics and field-craft standards shaped the response, so the need for good intelligence, unit training and the control of high buildings was emphasised. Permanent fortified bases were constructed, just as in a conventional war, and were manned by the same units throughout their tour of duty. High-profile saturation patrolling, driven by political expediency, was the norm. By 1972 the original strength of 3,000 had expanded to 32,000. It fell after this but was still generally between 17,000 and 18,000. After 1979 the Army's profile was kept deliberately low except when trouble seemed to be getting out of hand, and the original emphasis on overt and reactive patrolling switched to preventive covert operations.

Special training

In 1969 Northern Ireland seemed to be merely the latest small war in which the Army faced a complex political situation; Palestine, Cyprus, Aden and Hong Kong had already provided it with experience of crowd control, curfews and conducting searches. But past experience proved totally inadequate. Tactics, techniques and procedures did not transfer well, and deploying in a box formation and unfurling a banner saying 'Halt or you will be shot' was utterly ineffective.[24] Different methods of interrogation were needed too.

It was soon evident that regiments needed about two-months specialised internal security training before being sent to Northern Ireland and that situation-orientation training greatly improved their effectiveness.[25] Significant improvement occurred once Northern Ireland Training Assistance Teams (NITAT) were established, which prepared units for deployment from 1972 onwards. The standard package involved urban-patrolling

techniques, riot control, shooting at fleeting targets and first aid. Descriptions of paramilitary tactics, organisation and capabilities, and the use of internal security equipment were included too. By 1976, regular Army units received three months training for a four-month tour of duty, with training concentrating on basic personal skills to ensure the high tempo of patrolling thought essential. Patrolling itself often combined foot patrols by neighbourhood patrol units and mobile patrols with aerial surveillance. The need for discipline and self-control when grossly insulted was emphasised.

The nature of the environment meant that the balance of responsibility soon shifted from officers to non-commissioned officers (NCOs) selected for their leadership skills rather than seniority or smartness. Northern Ireland became known as a corporal's war for two reasons. First, situations demanded quick decision making, and tactical actions could have strategic consequences. A few salvos of small-arms fire on so-called Bloody Sunday in 1972 gave the IRA a propaganda victory the British government has yet to recover from. Second, most operations involved small units in almost continuous contact with the local population, which meant that NCOs represented the critical link in the command chain. Good NCOs also maintained morale in the face of frustrating and constant verbal abuse from the population. This became especially important during the late 1990s when political developments required a de-escalation at the sub-unit level so as to reduce the military profile without removing or reducing military capability. It meant less aggressive patrolling techniques, minimal vehicle movement and fewer military teams accompanying selected police patrols at the same time as criminality became of more general concern.

Lessons learned

The lessons learned were often case specific but many remain of general relevance and support the approach to operations outlined in Chapter 1. A useful list of such lessons, covering 1969–76, is provided by the anonymous 'MOUT Lessons Learned: Northern Ireland', available in *The Urban Operations Journal* at www.urbanoperations.com/belfast.htm. The list includes the following:

Specific operational lessons:

- The Army's overall combat force mix was warped by such prolonged infantry intensive operations. If training to deploy is included, operations absorbed 20–33 per cent of all British infantry battalions at any one time between 1969 and 1993. This led to the Army keeping a greater number of infantry battalions within the overall force mix than it would have otherwise done, leading to higher force levels than necessary to meet external commitments.[26]
- Contrary to initial expectations, operations were neither shortlived nor low cost. 300,000 troops served in the province between 1969 and 1994, casualty figures were significant, and half of British counterintelligence's resources went towards countering terrorism.

General operational lessons:

- The tempo in cities is fast even in low-level operations. And constant rounds of patrols, intelligence gathering, administration, deployment at short-notice, interrupted sleep, sniper attack and verbal abuse mean fatigue.
- Intelligence is more critical when fighting paramilitary groups in cities, and human intelligence is more important than technical intelligence.

Specific tactical lessons:

- Patrolling to dominate the ground demands great mobility. Soldiers must be able to enter and exit armoured vehicles quickly, catch demonstrators and climb through buildings.
- Non-lethal weapons were especially useful for crowd control and riot suppression, as were tear gas and water cannons. Riot batons and rubber bullets (and the plastic rounds that replaced them in 1975) were very useful for keeping demonstrators out of petrol-bomb range. Even so, extensive use of these technologies became counterproductive when demonstrators developed a tolerance to tear gas.
- Helicopters were important assets but there is no evidence they were widely used.

This list may be usefully supplemented by the case study of British operations in Belfast, in the US holding publication *Handbook for Joint Urban Operations*.[27] This emphasises that

controlling the civilian population is the primary focus of prolonged operations because it is the key to identifying combatants, and that the key to control is the 'synchronisation of military and police responsibilities'. Reflecting US concerns, the authors comment that the British experience is valuable because it 'demonstrates the tensions between urban population control and force protection requirements. It also demonstrates how difficult it is for a stabilising force to maintain impartiality in a highly charged political environment.'[28]

Limits of policing

The main focus of military activity in Northern Ireland was to deliver a credible counterterrorist capability, not to police the province. The environment of Northern Ireland is very restrictive, highly charged, very public and close to home, so the Army was constrained by the policy and planning initiatives of the RUC, the media, community relations and local sensitivities.

Military operations were based on the three pillars of attrition, deterrence and reassurance, and their purpose was to assist the RUC restore 'normality'. Individual soldiers did not have additional powers of arrest; they were used to control unruly mobs but they never conducted normal police duties. They protected RUC patrolmen but if the RUC man failed to turn up they did not deploy or if they did it was for locally based defence. The difference between the two forces can be illustrated by reference to RUC Neighbourhood Patrol Units (NPUs). The RUC's core function was reactive, responding to calls for assistance rather than neighbourhood patrolling; it saw mobility, for instance, as a separate element rather than a key factor. And time and resource management shaped RUC patrolling, with shift changes ensuring its predictability. That the Army developed unpredictable patrolling patterns and high standards of streetcraft was partly in response to this. More importantly, it was always judged essential that soldiers should think like soldiers rather than police.

Peacekeeping in the Balkans

Counterterrorism in Belfast represents an important aspect of policing; peacekeeping in the Balkans provides another. A vignette of a typical urban situation confronting troops entering Kosovo

in 1999 is found in a newsletter, written for their families, by men of the King's Royal Hussars Battle Group. In it they describe their entry into the town of Podujevo, 25 km due north of Pristina. The town smelt of sewage, death and neglect; the main streets were full of rubbish, rubble and feral dogs; broken glass from shop windows and household debris covered the pavements. Other than the blue and black Serbian Ministry of Interior police uniforms and flags, the only colours to be seen in the town centre were those of clay, red bricks and blackened wood. Yet within a week street vendors were selling cigarettes, chocolate and a few vegetables; tractors, buses, cars and the occasional horse and cart moved through the streets; the dominant smells became those of Bond cigarettes, grilled meat, chai and exhaust fumes.

Patrolling such towns was sometimes similar to patrolling in Northern Ireland. Continuity was suggested by the use of multiple patrols from established bases, and the protection of fixed positions. That a mix of manhandling and moral pressure, rather than tear gas or weapons, enabled 150 British peacekeepers to prevent a crowd of 60,000 ethnic Albanians crossing a bridge in Mitrovica in 2001 to get to the Serb-dominated northern side of the town is sometimes taken as evidence of the transferability of lessons. But that is where similarities end. In Northern Ireland the Army supported the RUC to uphold law and order, whereas there was neither police nor law in Kosovo. The importance of peacekeeping in the Balkans for urban operations is that it suggests ways in which future operations will develop regardless of the physical or political environment. Three examples suffice to make the point. Patrolling required, and resulted in, a huge infrastructure of bases, communications and logistic support. The day-to-day functioning of operations was soon dependent on abundant local labour, hired through contractors such as the US company Brown & Root. Operations also required the military to co-operate closely with the civil administration and UNMIK (United Nations Interim Administration Mission in Kosovo) agencies, the locally recruited Kosovo Police Service, and aid agencies. Working relationships had to be developed with UNMIK police, but the uneven record of UNMIK's police meant that KFOR troops were often the only international security presence in urban areas.

Second, in the absence of internationally acceptable forms of law and order, KFOR became responsible for overall public safety, but operations brought their own policing problems. In the summer of 1999, for example, Provost Marshall Lt Col. Carlucci, senior KFOR adviser, saw more serious revenge and arson attacks than petty crime. But 12 months later the balance was reversed because the arrival of KFOR and the UN brought money to Kosovo, with a direct increase in criminality the result. According to US force headquarters the crime rate is now comparable to that of Los Angeles, with murder, robbery and shootings, forgery and prostitution to the fore. That criminal networks and intimidation have resurfaced is unsurprising, but its importance here lies in the fact that such problems are a police rather than military matter.

Last, successful operations in the Balkans were backed by the threat or use of warfighting capabilities. A patrol-based response was appropriate for much of the localised violence and intimidation confronting KFOR – but British forces applied it in terms of British law, meaning it often lacked credibility; criminals went free because there was no means to maintain the necessary continuity of evidence. Even so, warfighting doctrine played a significant part in shaping operations. The Multi-National Brigade's campaign, for example, was approached in terms of deep, close and rear operations. Close operations set the conditions for deep operations, which were always offensive in nature even if they were primarily information operations targeted against the extremists' leadership; they delivered the decisive effect at brigade level. All intelligence, surveillance and reconnaissance (ISR) assets were brought together under unified command, and offensive support groups were deliberately adapted from divisional warfighting models.[29] An extreme example of what could happen in the absence of combat capabilities and political will occurred at Srebrenica in 1995, when lightly armed Dutch troops stood by as Serb forces massacred 7,000 Bosnian Muslims.

Policing the Balkans

Military forces are often pushed into non-traditional roles during peacekeeping, but they are used to police primarily because they can deal with the practical problems associated with deployment and enforcement. The problem linked to deployment, of timing,

is comparatively straightforward but that of enforcement, of function, is more complex.[30]

Deployment gaps result from the fact that, although restoring order is a priority, local security forces have either ceased to function or are part of the problem, and multinational civilian police (CIVPOL) forces are incapable of dealing with post-conflict tensions. As a result troops are expected to enforce order and separate armed or enemy groups, at least until CIVPOL are able to operate effectively. This meant that the British company commander in western Pristina in mid-June 1999 was military commander, chief of police and prison governor. During their eight days in Pristina his company dealt with 12 hostage killings, 32 ethnic attacks, 22 ethnic shootings (resulting in 11 deaths), more than 40 lootings and hundreds of weapons seizures. Hence the comment by Robin Cook, then British foreign secretary, that three weeks into the Kosovo operation three-quarters of KFOR's duties were police-related. Four years later, the British troops who took Basra were expected to fill the gap left by the 16,000 Iraqi policemen who had kept order in and around the city.

Enforcement gaps are more controversial. They occur when the military are required to perform functions that fall between the inner shell of public security for individual crimes and small-scale disturbances, and the outer shell where the military act as a rapid reaction force, maintaining area security. The deficiencies typically relate to the maintenance of law and order and non-compliance with peace processes, and are compounded by political ambiguity, special interests and CIVPOL weakness. The withdrawal of Serb forces and the absence of an Albanian police force in lawless Kosovo, for instance, left KFOR as the only agent capable of establishing any form of order. Even so, the military's choice of policing activities is selective.[31] This is unsurprising given the range of activities associated with peacekeeping. Policing ranges from high-profile 'arrests' to preventing the intimidation of old people. In between are all the activities associated with hundreds of NATO-led soldiers conducting house-to-house searches in an effort to improve security, seize weapons, capture known criminals, create a security cordon to prevent further arms from entering an area and support or monitor local forces. Policing is also shaped by specific problems, vested interests and fears of mission creep. In Bosnia, mission

creep was invoked by SFOR (Stabilisation Force) troops to avoid arresting war criminals, for instance, and to explain their apparent inaction in the face of civil disorder. The situation was different in KFOR in that Generals Rose and Reinhardt made it clear that KFOR's purpose was to underpin civilian reconstruction, hence the prominence attributed to community patrolling and other policing activities intended to promote confidence.

The Limits of Policing

The emphasis throughout this chapter has been on policing by armies in response to the need to control urban populations. The key to this in Northern Ireland was the synchronisation of military and police responsibilities, and the promotion of intelligence gathering. The balance was different during peacekeeping operations in the Balkans, but deployment and enforcement gaps meant that infantry often fulfilled a policing role. Historically, however, neither Northern Ireland nor the Balkans is typical of policing in low-level operations, especially when terrorism or insurgency is involved. More typical are armies operating on the premise that the end justifies the means. The dangers are made explicit by the record of French paratroopers during the 1957 battle of Algiers.

Battle of Algiers

The battle of Algiers was the pivotal event in the complex and appallingly brutal war for Algerian independence that lasted from 1954 to 1962.[32] Its importance here is that it illustrates the potential dynamics of policing urban terrorism in the developing world. It emphasises that there can be no purely military solution to urban terrorism.

In 1954 the National Liberation Front (FLN) began a liberation war that soon spread to the colonial capital, Algiers, where most of the war's casualties occurred. Confronted with increasing violence, indiscriminate bombings and assassinations, in January 1957 the resident minister of Algiers gave General Massu of the 10th Parachute Division military control of Algiers. Massu, who maintained operational control of the city until September 1957,

thought that conscience was a costly luxury in such circumstances; all that mattered was the result. There were no holds barred in what followed. The FLN used attractive girls to bomb crowded cafes and the paratroopers resorted to torture to obtain information in the battle against terrorism. The fact that neither side could afford to lose encouraged the army's use of torture. But it was not isolated incidents of torture that were so damning so much as its systematic use. This was arguably the inevitable outcome of the type of war being fought. The rebels used terror as a means of political intimidation, and their success depended on being concealed by the native population. The French therefore used torture, quite pragmatically, to extract intelligence and prevent future violence. One resulted in the other and it was often impossible to distinguish between cause and effect.[33]

Unlike the British in Belfast who knew the names and faces of many of the IRA, patrolling paratroopers in Algiers could not tell the difference between a terrorist and an old lady. They, like the Germans in occupied France or Americans in Vietnam, had scarcely the slightest idea for whom they were looking. And there were fewer than 8,000 of them compared to the 80,000 Algerians living in the alleys and slums of the Casbah, which become a series of secret passages, bomb factories, arms caches and hiding place. The paratroopers hated city operations: 'Combing a city for persons unknown, they complained, was *un boulot de flic*, a cop's job.'[34] As far as they were concerned, police work meant intelligence work, not in the sense of checkpoints and armed patrols but in terms of rounding up suspects and bringing them in for interrogation. They therefore arrested and detained hundreds suspected of nothing more than having potentially useful information. Fear and frustration meant their response rested on intelligence gained by physical means. Interrogations followed arrests followed interrogations. The army did not care what became of those it arrested; it was interested only in the immediate exploitation of whatever information it could get. The fact that the military had police powers facilitated the process, and it is not hard to see how terrorism resulted in torture. Yet in the end the army response was self-defeating. The paratroopers destroyed the nationalists' leadership and command structure within months of taking control of Algiers but strategic victory

went to the nationalists. International outcry against torture led to French isolation within the UN and was a decisive factor in winning Algerian independence.

The paratrooper's experience suggests that forces need to be trained and prepared for situations that challenge conventional beliefs, values and practices. This means looking beyond past experience, especially when counterterrorism or COIN are involved; warfighting experience from Indo-China proved to be misleading in Algiers. The battle for Algiers also serves as a reminder that there is no such thing as clean or humanitarian war – and probably no such thing as precision or surgical operations in cities – and that short-term tactical advantage must be backed by long-term political strategies. That this is a lesson so consistently ignored suggests that understanding remains the greatest factor limiting operations.

Unanswered Questions

This chapter argues that the nature of the military task in fragile urban societies during low-level operations is best understood in terms of policing. Most armies are not designed or trained to take on policing roles but they are used to fill functional gaps because they are disciplined and well resourced. This usage is reinforced by the fact that the purpose of most operations is control and intelligence. Patrolling, security assistance and raids are characteristic roles, with patrolling an especially strong feature in British COIN, counterterrorism and peacekeeping operations. Its purpose is to show a visible presence, and assess or control the situation in a specific area; verbal communication between patrol members is encouraged. Consequently, patrolling has little in common with conventional combat operations, which place a premium on stealth. Indeed the need to interact with civilians in order to get information or improve situational awareness means that stealth is counterproductive. It also means that principles such as focus, alertness, unpredictability and mutual support become critical. So too do robust transitional capabilities. For the great danger in such an environment is that the situation can change very quickly; a benign environment can quickly become dangerous.

Many questions about low-level urban operations remain unanswered. The transferability of lessons is one, for expertise in one type of operation does not necessarily transfer as expertise in another involving a different culture. British models of peacekeeping apparently worked in the Balkans because the region's closeness to the EU meant that ideals of intercommunal stability seemed reasonable. Yet this may not mean much. Ethnic cleansing had been more or less completed by the time British forces arrived in Bosnia, so they could afford to adopt a superior attitude of 'This is like Northern Ireland and we know what to do.' When Richard Holbrook asked British officers what they would do if Kosovo were Northern Ireland he was told they would step up armed foot patrols, sweep the area with armoured vehicles, keep the communities apart and infiltrate the terrorists.[35] Yet these are not realistic options in Kosovo. Furthermore, the troubles in Northern Ireland have lasted decades whereas the willingness of the international community to stay in Kosovo is questionable.

A linked question concerns the need for special training. It is generally agreed that training is the critical factor in urban operations, but the degree to which this may be balanced by past experience and learning on the job remains unquantified. The optimum balance between experience, learning on the job and theatre-specific training is unclear. The case of British forces, for whom training is generally reckoned to be strength, illustrates the problem. British forces had a long tradition of fulfilling police tasks without special training throughout the nineteenth and much of the twentieth centuries. From 1945 until 1969 the majority of their deployments were COIN-related and it was not until deployment to Northern Ireland in 1969 that they were again involved in policing, for which no special training was initially available. As the frequency and scope of these and similar operations increased in the post-Cold War context, Army pre-deployment training focused on specific tasks and theatres. NITAT was developed for Northern Ireland and UNTAT for operations in the Balkans, but short-notice deployment to Kosovo, East Timor and Sierra Leone prevented the development of full training packages and again resulted in learning on the job. As a result, the units involved are generally well prepared for warfighting but have to rely on previous experience or learning on the job for transitioning from warfighting to peacekeeping or

vice versa. The best way to train for situations that challenge conventional beliefs, values and practices also remains unclear. Military assets can undoubtedly be used as an interim measure in a range of low-level operations but such roles are often closer to those of occupying powers and, despite a developed peace-keeping doctrine, are poorly covered in current training, doctrine, force structures and readiness. Even so, many tactical lessons are clearly common to many cities. This suggests that the nature of the urban environment is more important than the mission type.

Notes

1. Public safety was of fundamental importance in the aftermath of urban operations in 1945 because without it there could be no administration and no prospect of discharging military responsibilities in the post-conflict phase. See F. Donnison, *Civil Affairs and Military Government North-West Europe 1944–1946* (London: HMSO, 1961), p. 62. The situation in Iraq in 2003 is different, but the urgent need for public safety is indicated by negotiations on the formation of a multinational stabilisation force in parallel with US efforts to form an interim Iraqi government. Homeland security and large-scale civil disturbances such as the 1992 Los Angeles riots are not considered here because their operational relevance to non-US military forces is questionable. US forces are instructed to be prepared to support the civil authorities across a range of mission areas, but federal agencies other than the Department of Defense take the lead responsibility for domestic incidents.
2. The terms are not mutually exclusive. 'Security assistance' is used here in the general sense of supporting a legitimate government, such as the interim Karzai government in Afghanistan. The case of Northern Ireland is different; Military Aid to the Civil Power (MACP), which maintains or restores law and order in situations beyond the capacity of the civil power, was provided in support of the Royal Ulster Constabulary (RUC).
3. The role of armour is contested. The main French, German, Italian, UK and US contingents in Kosovo, for instance, have historically had large elements of artillery, main battle tanks, attack helicopters and other heavy equipment designed to fight conventional battles. National governments demanded that they be sent to Kosovo for force protection reasons, just as they probably would in any future urban operation. But heavy track vehicles have little utility in low-level security missions; they are manpower intensive, damage roads and walls, and increase the risk of civilian casualties in

congested streets. Tanks undoubtedly have great psychological effect but policing operations need the mobility provided by multi-purpose wheeled vehicles; the UK armoured infantry battle group in Pristina had a company's worth of armoured 'snatch' Land Rovers for urban patrolling. American, British and German contingents in the Kosovo Force (KFOR) used unmanned aerial vehicles (UAVs) for surveillance in Kosovo but the need for fixed-wing reconnaissance and surveillance lessened once the situation settled down.

4. JWP 0-01, *British Defence Doctrine*, 1st edn (London, MoD, 1996), p. 6-5. Compare B. Hoffman, 'Change and Continuity in Terrorism', *Studies in Conflict & Terrorism*, 24 (2001), pp. 417–28; J. Morrison Taw and B. Hoffman, 'The Urbanisation of Insurgency: The Potential Challenge to US Army Operations', *Small Wars and Insurgencies*, 6, 1 (1995), pp. 68–87.
5. A. Roberts, 'Counter-terrorism, Armed Force and the Laws of War', *Survival*, 44, 1 (2000), pp. 7–32.
6. See, for example, D. Press, 'Urban Warfare: Options, Problems and the Future', *Marine Corps Gazette* (April 1999), pp. 14–18.
7. See Department of the Army, *An Infantryman's Guide to Combat in Built-up Areas*, Field Manual 90-10-1, p. G-1; S. Edwards, *Mars Unmasked: The Changing Face of Military Operations* (Santa Monica, CA: RAND, 2000).
8. C. Bellamy, *Spiral through Time: Beyond 'Conflict Intensity'*, Occasional, 35 (Strategic and Combat Studies Institute, 1998), pp. 20–2. It is necessary to distinguish between 'intensive' and 'intense'. Intensive means that heavy firepower is concentrated on a small area, whereas intense means that firepower is heavy.
9. The quotation introduces the Urban Operations Journal's homepage www.urbanoperations.com. That the outcome of such operations may hang on decisions taken at the lowest level is encapsulated in the notion of the 'strategic corporal'. See C. Krulak, 'The Strategic Corporal: Leadership in the Three Block War', *Marine Corps Gazette*, 83, 1 (1999), pp. 18–22.
10. Personal communication, R. Gangle, 3 September 1999. For Krulak's speech see 'The Three Block War: Fighting in Urban Areas', National Press Club, Washington, DC, 10 October 1997.
11. The British conviction that experience is more important than doctrine shaped recent operations in Iraqi cities such as Uum Qasr and Basra. It is a legacy of decades of COIN when skills were learned on the job. One advantage of this heritage was familiarity with the notion of using the minimum force necessary to restore order. Soldiers knew that it encouraged a degree of consent that facilitated mission goals, especially when allied to what came to be called 'hearts and minds'. See G. Bulloch, 'Military Doctrine and Counter Insurgency: A British Perspective', *Parameters* (Summer 1996), p. 8.

12. See J. Paget, *Last Post: Aden 1964–1967* (London: Faber & Faber, 1969).
13. 'Nairobi violence raises fear for election', *Financial Times*, 6 December 2001.
14. Compare B. Milanovic, *True World Income Distribution, 1988 and 1993* (New York: World Bank, 1999); S. Chen and M. Ravallion, *How Did the World's Poorest Fare in the 1990s?* (New York: World Bank, 2000).
15. Personal communication, K. Born, 7 June 2001. Compare K. Margry, 'Battle for Aachen', *After the Battle*, 42 (1983), p. 13. For patrolling in Haiti see E. Borowiec and J. Stevens, 'Urban Patrolling: Experiences in Haiti', *Infantry*, 86, 4 (1996), pp. 8–10.
16. M. Huband, *The Skull Beneath the Skin: Africa After the Cold War* (Boulder, CO: Westview, 2001), pp. 202–6. Such a situation may or may not result in frustration for Western troops. There are many anecdotal accounts of French troops in Rwanda and US soldiers in Haiti simply watching slaughter because stopping it was not within their remit.
17. 'Refugee influx brings looting and murders', *Financial Times*, 26 June 1999.
18. See C. Beadon, 'Patrolling in the Urban Environment', *Marine Corps Gazette*, 86, 5 (2002), pp. 49–51; 'Hard man, soft man act in policing streets of Baghdad', *Financial Times*, 6 June 2003; Paget, *Last Post*, p. 148; J. Bohm, 'Antiterrorism Mission: Manama, Bahrein', *Marine Corps Gazette*, 82, 7 (1998), pp. 58–67.
19. See M. Stanton, 'Riot Control for the 1990s', *Infantry*, 86, 1 (1996), pp. 22–9; Center for Army Lessons Learned (CALL), *Civil Disturbances*, CALL Newsletter 00-7. Prisons are potentially a serious problem too.
20. See J. Masselos, 'Postmodern Bombay: Fractured Discourses', in S. Watson and K. Gibson (eds), *Postmodern Cities and Spaces* (Oxford: Blackwell, 1995), pp. 199–215.
21. See J. Bailey, 'MOUT Operations in Kosovo, February–October 1999', in R. Glenn (ed.), *Capital Preservation: Preparing for Urban Operations in the Twenty-first Century* (Santa Monica, CA: RAND, 2001), pp. 241–65.
22. The wrong training is, however, disastrous, as Russia discovered in 1994. The internal troops sent to Chechnya were trained in riot control, not unrestrained urban warfare.
23. See C. Kennedy-Pipe and C. McInnes, 'The British Army in Northern Ireland 1969–1972: From Policing to Counter Terror', *Journal of Strategic Studies*, 20, 2 (1997), pp. 1–24. COIN and counterterrorism are generally undertaken as internal security operations by British forces. Dewar describes his experience as a company commander in Belfast in 1974 in M. Dewar, *War in the Streets: The Story of Urban Combat from Calais to Khafji* (London: BCA, 1992), pp. 158–77.

24. Controversy also surrounded the importation of Hong Kong's public order methods to British police forces during the early 1980s. See G. Northam, *Shooting in the Dark: Riot Police in Britain* (London: Faber & Faber, 1988).
25. See N. Dodd, 'The Corporal's War: Internal Security Operations in Northern Ireland', *Military Review*, 56, 7 (July 1976), pp. 59–68. The number of explosions taking place a month (up to 200) made the training of bomb disposal officers (and sniffer dogs) essential too.
26. In contrast the IDF resorted to heavy weapons in 1982 precisely because it lacked infantry. Its infantry forces further declined as a percentage of the total force mix as artillery forces were built up, 1973–82.
27. Joint Staff, *Handbook for Joint Urban Operations* (Washington, DC: 2000), pp. IV-39–48. An abbreviated account can be found in Joint Publication (JP) 3-06 *Doctrine for Joint Urban Operations* (Washington, DC: 2002), pp. IV-4–5.
28. *Handbook*, p. IV-47.
29. Similarly, targeting processes were used to plan and execute non-lethal manoeuvre, civil–military operations and information operations. See R. Gonzales and M. Romananych, 'Nonlethal Targeting Revisited: The Kosovo Experience', *FA Journal*, 7, 3 (2001), pp. 6–10.
30. See M. Dziedzic, 'Introduction', in R. Oakley, M. Dziedzic and E. Goldberg, *Policing the New World Disorder: Peace Operations and Public Security* (Washington, DC: National Defense University, 1998), pp. 3–18.
31. This is also true for military police. Military police (MPs) are trained and equipped for warfighting, and the skills developed during garrison policing are directly transferable to many operations; in the summer of 2003, 48 armed British MPs, aided by 900 unarmed locals, were used to police Basra's 1.3 million people. But the roles and functions of national MPs vary considerably, as does their jurisdiction.
32. See A. Heggoy, *Insurgency and Counterinsurgency in Algeria* (Bloomington, IN: Indiana University Press, 1972); A. Horne, *A Savage War of Peace: Algeria 1954–1962*, 2nd edn (London: Papermac, 1987); J. Talbot, *The War Without a Name: France in Algeria 1954–1962* (London: Faber & Faber, 1979). The paratrooper's policing role is vividly portrayed in G. Pontecorvo's 1966 film, *Battle of Algiers*.
33. Horne argues that in order to understand how torture became institutionalised in the French army it is necessary to take into account horror at FLN atrocities, determination not to lose another campaign, and the brutalising effects of cruelty. See Horne, *A Savage War of Peace*.
34. Quoted in Talbot, *The War Without a Name*, p. 85.

35. M. Ignatieff, *Virtual War: Kosovo and Beyond* (London: Chatto & Windus, 2000), p. 27. The British attitude was of little consolation to the Serbs of Pristina, the population of which rapidly fell from 20,000 to 1,000. See T. Judah, *Kosovo: War and Revenge* (New Haven, CT: Yale University Press, 2000).

5 Enforcement

The second archetypal operation is enforcement. Enforcement operations are coercive in nature and are typically undertaken in support of Chapter VII of the UN Charter or of an international organisation such as NATO or the Organisation for Security and Co-operation in Europe (OSCE). They involve third-party intervention in conflicts where consent is missing, and their objective is to restore or maintain peace and promote diplomatic, humanitarian or political objectives, usually against some of the disputants' wishes. As a result, responsibilities often include potentially conflicting tasks such as forcibly separating belligerents, guaranteeing or denying movement and enforcing sanctions, while establishing and supervising protected areas, and protecting humanitarian operations and human rights. Combining force and aid in one operation is a strong trend (as such it is addressed in Chapter 7), but the key factor in enforcement operations is that they are mandated to use warfighting techniques. It is this that allows enforcement to encompass a wide range of operations, from the raids, specific strikes and small-scale seizure operations United Nations Operation in Somalia (UNOSOM II) undertook in Mogadishu to the bombings of NATO's 1994 Operation Deliberate Force in Bosnia. Deliberate Force, for example, was an air attack designed to reduce Serbian military capabilities to threaten or attack safe areas and UN forces. It was in direct response to the warring factions' disregard of UN mandates for

safe areas and heavy weapons exclusion zones, and their targeting of NATO and UN aircraft and ground forces. But the NATO–UN partnership also provided humanitarian relief to cities (principally the besieged city of Sarajevo) from early 1993 until 1996, at the same time as conducting air strikes to relieve them. The stated intent was always to preserve as much of the infrastructure of cities as possible while destroying the military foundation of Serbian power.

Enforcement operations are important here because they capture the contradictory intent of Western operations, and their ambiguity and unpredictability makes them representative of mid-level operations. They rely on warfighting capabilities but are designed to restore and maintain peace. They are held to be a type of military activity that, while coercive in nature, remains distinct from war, though in reality they are often war in all but name – NATO's stated objective of ensuring Serb compliance with an existing UN Security Council resolution involved a 78-day bombing campaign. Their justification rests on the assumption that force can be used impartially to ensure compliance with a given mandate without designating an enemy or prejudicing the political outcome of the conflict in question.[1] Enforcement cannot, theoretically, be merged into punishment or retribution, but the line between the two is often ill defined, depending on political decisions. Similarly, one side is usually favoured; the USA reinforced Croatian ground offensives intended to deter Serb aggression during the early Balkan wars. Not surprisingly, most enforcement operations involve multiple missions (about which there is frequently confusion) and the linkage between tactical and strategic effect is especially tight. The resultant ambiguity and unpredictability is mediated by situations such as those confronting UN forces in Somalia in the autumn of 1993, which this chapter uses as its central example, and the International Stabilisation and Assistance Force (ISAF) in Afghanistan in 2002. These examples convey a clear impression of the traditional problems and conventional methods associated with enforcement operations in cities, which balances the high-technology battle plans relying on advanced electronic sensors referred to in Chapter 3. Each emphasises that, while success in urban operations is traditionally based on tactical effectiveness, this may not be sufficient in discretionary enforcement operations against

intelligent asymmetric adversaries or among politicised coalitions. And each shows that technological resources and heavy power cannot make up for doctrinal and political deficiencies. This does not, however, mean that tactical effectiveness is irrelevant – far from it, as a comparison of Mogadishu with the successful but less well known Australian operation in Baidoa, 1993, shows. But, as a general rule, the relationship between military and political success is variable. For, while the willingness to use measured and discriminate force is as essential as ever, the potentially strategic impact of enforcement operations means that enforcement must form part of a coherent and comprehensive strategy if it is to be successful. The lesson is basic but of continuing relevance.

Unpredictable Operations

The most consistent characteristic of enforcement operations in cities is their unpredictability. Several factors explain this. The first relates to cities themselves. Not only are they politically significant and accessible to the media but also weapons are usually easily available. It is true that many terrorists and freedom fighters fall into the same categories as those attracted to violence in any big city, but the difference in a Belgrade or Beirut is the availability of powerful weapons and the readiness to use them. Local 'police' factions and gangs with access to a variety of armoured vehicles, artillery and heavy weapons are normally irritants rather than military threats, but situations can quickly escalate. Both Mogadishu in early 1993 and the Bosnian town of Tuzla in 1995 shared an environment of illegal checkpoints, frequent use of small arms and mortars, and theft from US forces. Disorder in Tuzla was containable by NATO's Implementation Force but this was not the case in Mogadishu where US forces became factions in the civil war.[2]

The second explanatory factor is that the line between enforcement and punishment or retribution is unclear regardless of the precise wording of UN sanctions or mandates. More importantly, what counts as enforcement for a multinational force may be war for the disputants, as happened in Mogadishu. A variant on this theme occurred in the Former Yugoslavia when multinational

troops enforced international mandates on the city of Vukovar, but Vukovar was conditioned to war, having seen intense fighting during the 1991 siege. Croat forces had held out for more than 100 days before surrendering, leaving the city devastated and in need of almost total rebuilding.

Third, enforcement is inherently ambiguous; there are no formally designated enemies. The problems this can create are evident when enforcement operations are compared to those of counterinsurgency (COIN). There are no clear boundaries between the two but urban enforcement and COIN differ in expected probability and intensity. Several hostile forces are present during enforcement but are assumed to be co-operative until they show otherwise. The mission is defensive, and its objective is to dissuade; rules of engagement (ROE) are strict and the emphasis is on de-escalation. COIN forms part of a broader political, economic and intelligence-led operation, but under COIN conditions an army knows that it is the enemy of armed insurgent forces, which in turn regards it as the enemy.[3] The disputants involved in enforcement are usually fighting for survival or to retain what they hold, whereas insurgents have national or international aims that frequently include the overthrow of established governments.

Fourth and last, enforcement involves asymmetric operations – it would not be undertaken if the enforcer were not the strongest force – but the context is usually that of internal war or an alien culture, which introduces a note of unpredictability. Usage of the term 'asymmetry' is problematic but it undoubtedly encapsulates the uncertainty and vulnerability of the post-Cold War world. And, as Spiller points out, the development of asymmetry as a modern military concept 'is indicative of the theoretical void in which orthodox twenty-first-century forces will be attempting to operate'.[4]

These factors reflect the volatility that lies at the heart of urban operations, magnifying the impact of tactical decisions and emphasising the need for both strategic awareness and conventional military skills. They are illustrated here by reference to three contrasting and representative styles of intervention and enforcement: US forces in Mogadishu in summer 1993, Australian forces in Baidoa in autumn 1993 and ISAF in Kabul in 2002. The USA followed a short-term, reactive and compartmentalised approach that relied heavily on maximum force and

technology. In contrast, Australian forces followed a community-based style that might be called peace enhancement: it was assertive but was also coherent and oriented towards the use of minimum force. Nine years later, ISAF was tightly restrained by political imperatives to low-level patrolling within Kabul.

Mogadishu, 1993

The experience of the US Quick Reaction forces in Mogadishu during UN operations in Somalia, UNOSOM II, in 1993 has been very influential in shaping the way Western forces understand and plan for urban operations today.[5] It emphasised the limitations of US conventional and elite troops in enforcement operations involving intelligent non-state adversaries operating in their own cities. It stressed the limitations of attrition-based US operations against adversaries employing low technology and unconventional defences, and made the West's vulnerabilities regarding own casualties and collateral damage explicit. It showed the operational challenges of transitional operations when enforcement overlaps with relief and combat operations. And it made clear the need for Western militaries to be aware of the physical and social characteristics of cities in the developing world.

By March 1993, the multinational Unified Task Force (UNITAF) had achieved its objective of providing a secure environment for the distribution of relief supplies. Despite this, managing the hostile factions and lawlessness of Mogadishu proved to be beyond the capabilities of its successor, UNOSOM II, a UN-mandated operation with expanded enforcement powers to disarm factions and establish democratic governance. UNOSOM's confrontation with the powerful warlord Mohammed Aideed in June effectively ended the UN's experiment in peace enforcement and resulted in a four-month war involving several thousand Somali casualties. Task Force Ranger, consisting of more than 400 special operations forces and US Army Rangers trained in urban combat, arrived in Somalia in August and soon disposed of the majority of Aideed's henchmen (and his financial adviser), but their relations with the population rapidly turned sour. They became part of the conflict.

Combat occurred on a number of occasions and always in the presence of non-combatants. US forces relied on their technology,

training and experience. They had Black Hawk (Super 6-1) and Little Bird (AH-6) helicopter gunships, night-vision goggles, elite Rangers, Delta Force commandos and recent experience of urban operations from Panama in 1989. But this proved inadequate against General Aideed, whose forces (armed with assault rifles and rocket-propelled grenades – RPGs) used guerrilla tactics to defy them. Somali fighters moved in small groups and relied on surprise, dispersion, concealment and, to some extent, innovation. Drums were used for communication, radios provided rallying calls and kites obstructed helicopters flights. Non-combatants hid gunmen, making it difficult for UN forces, constrained by stringent ROE, to distinguish between combatants and non-combatants. Mark Bowden describes how 'US Rangers saw a Somali with a gun lying prone on the street between two kneeling women. The shooter had the barrel of his weapon between the women's legs, and there were four children actually sitting on him. He was completely shielded in non-combatants …'[6]

The climactic firefight of 3–4 October, which resulted in the humiliation and withdrawal of US forces, illustrates most aspects of the asymmetric contest. On the afternoon of 3 October, a company of Rangers and Delta Force commandos fast-roped down from a helicopter into a clan gathering at the Olympic Hotel. The mission was initiated on the recommendation of National Security Agency communications experts who, on the basis of intelligence gained from sophisticated technology, had established that Aideed was staying at the hotel. The hotel was successfully stormed and 24 prisoners seized, but the general was missing. The area was in uproar when the Americans came to leave, and two of the accompanying eight troop-carrying M-60 helicopters were shot down by RPGs designed for ground fighting. The Somalis knew that the Rangers, who had fast-roped their way into the narrow streets surrounding the hotel, would have to leave by road, and so immediately set up roadblocks all over the city. This meant that the convoy holding the Somali prisoners, which had been ordered to secure the second crash site, suffered multiple ambushes before aborting its mission. A second convoy eventually managed to rescue Task Force Ranger but not until nine hours later. Eighteen Americans were killed; one of whose mutilated body was dragged through the streets. Ironically, one of the most significant lessons of the whole episode was that it proved the

usefulness of manoeuvrist principles: Somali fighters unbalanced US decision-making cycles.

Relearning lessons

Just as events in Mogadishu dominated operations in Somalia so the urban environment shaped the enforcement operation in Mogadishu. Initial problems associated with the lack of infrastructure were soon addressed but the combined effects of the city's streets, buildings and population limited more than situational awareness, and most of the known lessons were reinforced.

The reasons why the October operation went so spectacularly wrong have been repeatedly examined.[7] They deserve to be. Operationally the mission was a success; only 18 Americans were killed and about 77 wounded in comparison with at least 500 Somalis deaths and more than 1,000 injured. But, politically and strategically, the operation was a UN and US failure. It showed that the UN (which was effectively on trial) could not sustain an enforcement operation. It was also very expensive, costing more than $1.55 billion in its first 12 months. And it made US political and military vulnerabilities obvious. Six weeks later President Clinton announced the immediate withdrawal of Task Force Ranger.

Many of the lessons learned are uncontroversial. The use of airpower and firepower, for example, was invariably constrained by the presence of non-combatants, the international media and the risks of fire. Even so, tactical air support was invaluable when indirect fire was severely restricted. It also provided responsive air cover; the OH-58 and AH-1 Cobra helicopter teams were familiar with operating on the Army's radio nets and had good response times, while the Air Force's AC-130 Spectre gunships provided excellent support. Close air support (CAS), however, proved a mixed blessing. One reason was that most targets in urban fighting were engaged at 25–100 metres – and this included CAS using 20mm cannon and 2.75- or 5-inch rockets from helicopters. Its sheer sound and destructive capabilities shocked both Americans and Somalis. Charles Ferry thought that an attack helicopter was firing on his own position until he saw the tracers hitting a building 50 m away: 'I had never been so close to an airstrike, and all of us were plenty scared.'[8] Air

strikes were undoubtedly effective suppressive fire but they achieved little else; Somalis quickly reoccupied buildings hit with massive fire. It is factors such as these that support Edwards' argument that, although the way in which urban operations are justified and waged by democracies has changed in the last 20 years, the significance of technology, airpower, surprise and intelligence is relatively unchanged.[9]

Naturally new needs were identified and new insights gained. The absence of heavier armour to clear roadblocks was unfortunate, and a combined arms presence would have been useful. An alternative to using an anti-tank missile to clear a room – it would have resulted in excessive casualties as well as setting the building alight – had to be found, but entering and clearing a room was not a major problem. Infantrymen could continue to use standard fire and manoeuvre tactics to leapfrog each other in the streets. The narrow streets, destroyed buildings and numerous cross roads meant that they were vulnerable to Somali gunmen spraying automatic fire from windows, but this was only to be expected. What the operation emphasised was rather the cumulative and frustrating nature of the challenges associated with crowded third-world cities. Above all, the operation's failure emphasised that the human architecture of a city represents an integral aspect of urban terrain and cannot be ignored by Western forces conducting enforcement operations, especially when those forces are a self-confident 'well-oiled, fully equipped, late twentieth-century fighting machine'.[10] The local population's disposition, intentions and capabilities were consistently underestimated or misunderstood by US and UN forces, yet together the physical and human elements magnified all the known operational and political problems associated with ambitious multinational missions with multiple objectives.

It proved difficult to address the American and UN misreading of the socio-political and cultural factors necessary for good situational awareness and force protection. It was not just that the troops concerned were not trained to deal with women and children (anecdotal evidence suggests that elite troops proved particularly unsuitable for this), but the Americans in particular repeatedly failed to understand that a show of force is not necessarily a sign of strength. American helicopters carrying US commandos swarmed over Mogadishu after an ambush of

Pakistani UN troops in June left 24 of them dead and mutilated, but this did more to demonstrate American frustration than inspire fear. The military capabilities of the inexperienced factions were consistently underestimated even though many of them proved to be aggressive and bold fighters. The UN did not realise that many militia officers had received extensive training at Soviet and Italian military schools and were able to adapt technologies and use unusual tactics. Somalis could fight in fire team and squad-size elements, and co-ordinate larger elements. Aideed's militia, which numbered 1,000–12,000 men, was organised to defend 18 military sectors in the city. Each sector had a duty officer and was connected through a crude radio network. They were armed with a mix of Soviet-bloc and NATO assault rifles, machine guns, RPG-7s, mines and explosives. And they completely controlled all areas outside the UN compounds at night. One American participant recalled that 'They always seemed to know when we were coming, and on which routes.'[11]

In practice the enforcement operation could not accommodate Somali willingness to take casualties. Discrepancies between ROE in multinational operations deepened the problem. Dealing with barrages of RPG fire directed against support helicopters was one thing but controlling the militia, women and opportunistic looters that swarmed towards crash sites and firefights was another. Even more difficult to accommodate was the fact that US forces had to respond to swarming at the same time as they provided medical assistance and security to food distribution and urban house clearing. They were comfortable with securing a port or performing combat-related tasks, but their training had not included acceptable ways to stop women and children from stealing cartons of cooking oil from food transfer points.[12] None of this was new but it contributed to, and intensified, the operational and strategic impact of the firefight.

Baidoa

A measured willingness to use force to obtain compliance with UN demands is essential in enforcement operations, especially when dealing with gunmen who respect only power and exploit any perceived weaknesses. A show of force may, of course, be sufficient in some circumstances. It is true that the use of helicopter

gunships did not deter Somalia gunmen armed only with assault rifles (IDF tanks and F-16s have not deterred Palestinians suicide bombers either), but Somalis generally fled from Bradley fighting vehicles and tanks. Tanks were useful in dispersing mobs because the Somalis feared the heat of their gas turbine engines, and the mine ploughs mounted on some tanks had a tremendous psychological impact. Yet, as Mogadishu emphasised, while a show of force may stop looting and disorder it cannot ensure success in politicised or multinational operations; force must be balanced by coherent and consistent strategies aimed at creating a secure environment. This involves disarmament policies and the establishment of a local police force and a functioning legal system. It demands an acceptable interface between the military and local civilians. UN policies not only failed on most counts but they often did so with an unwarranted degree of arrogance and brutality.[13] A more successful approach was that employed by Australian forces in Baidoa, a town in south-central Somalia that had experienced starvation the previous year.[14]

Aware that his operation in Baidoa would fail unless a secure environment for the distribution of humanitarian aid was established, the Australian commander took on the role of a military governor, in a COIN-style operation: Australian forces were placed above the clansmen instead of among them. Security was maintained by a constant and visible presence, with relentless patrolling on foot and in armoured personnel carriers, static security positions and quick reaction forces. Disarmament formed an essential part of the Australian strategy, as did aggressively protecting humanitarian aid convoys. The Australians also arrived with a comprehensive civil-affairs programme. They effectively engaged in 'nation building', training an auxiliary police force to deal with local banditry, and restoring a functioning legal system based on the 1962 Somali penal code. By such means security in the region was ensured. It was sustained by the 1,100 French UN troops that replaced them in May 1993, and by the Indians who succeeded them, both of whom practised 'total immersion'. As a result Baidoa represented a UN success story until 1994.

Even allowing for the differences between Mogadishu and Baidoa in terms of size and clan composition, the contrast is significant. The Australians, recognising that Somalia was a

heavily armed state, used measured force to restrain local warlords, but they also employed a coherent strategy to deal with the humanitarian and socio-political symptoms of violence. In contrast, the USA reacted or improvised; its attempts at rebuilding the police were badly judged and grudging, while disarmament was spasmodic.[15] As Patman emphasises, the US failure was not one of enforcement so much as a failure to pursue a coherent strategy consistently. Thus US forces insisted that UNITAF was a strictly humanitarian mission until the attack on the Pakistanis showed this was misguided. They then swung to the other extreme and led a notorious manhunt for General Aideed. Their application of military force in a densely populated urban area like Mogadishu proved politically and militarily counterproductive.

Back to the future

Enforcement operations in Mogadishu remain relevant for many reasons – the extensive (primarily tactical) lessons-learned literature published since is evidence of this. But there are also valuable general themes to be acknowledged. Of these, the American vision of conflict in a developing city is noteworthy, as is media complicity in manipulating its visual imagery, and the business opportunities the conflict provided.

The British journalist Mark Huband describes the futuristic nature of operations according to US forces. Before their invasion conflict took place in the streets, which was where the guns, arguments and car horns were. After it Cobra attack helicopters buzzed across the city, 200 feet above:

> They were painted black, invisible against the night sky, just traced across the darkness by their deafening sound. Then a flare would be launched, suspended in the darkness, and the helicopters would hover menacingly over streets and buildings doused in light as red as fire … It was the land of Blade Runner, the city of Robocop. Imagine a city wracked with crime, where the villains career through streets on camouflaged battle wagons, high on drugs, free to roam at will, extort money, slaughter their enemies. Then suddenly the 'forces of good' discovered a new weapon: night vision glasses to spot

> the bad guys. An old machine gun is fired by a desperado at the rotor blades … In return a missile is fired from the night sky. The crooks are blown to pieces. That was the reality of Mogadishu, complete with film cameras to record it all.[16]

Media complicity was evident throughout. Selective imagery, such as the sleek gunmen on their 'technicals' (armoured pick-up trucks mounted with recoilless rifles) amid ruined buildings, was one strand.[17] More damningly, the visual imagery associated with Mogadishu was deliberately manipulated by most of the organisations and agencies involved, including the military. Huband's description of the fake invasion by US Marines in December 1992 is indicative of the depth of the complicity. In the three weeks before the arrival of US Marines, CBS was estimated to have spent some $2.5m on covering Somalia. Not to be outdone, CNN brought in six camera crews to record the arrival of US Marines at an airfield on the beach that contained no enemy – Pakistani UN forces had secured the airfield some six weeks before.[18]

The operation was as much a business opportunity for news companies as it was for Somalis. Huband had personal experience of the latter. He stayed in a house owned by Somalia's most successful drug dealer, Osman Ato, who had been the representative of the American oil company Conoco before the war. (Mike Durant, the Black Hawk pilot taken captive on 3 October, was kept in another of Ato's houses.) Ato earned hundreds of thousands of dollars from renting large houses in Mogadishu to relief agencies. He also controlled the import of the mild narcotic *qat* and owned many of the technicals gunmen drove around in.[19]

Low-profile stabilisation

The problems associated with the Mogadishu debacle continue to resonate through decision making, reinforcing the USA's aversion to low-level enforcement operations and anything that suggests constabulary duties or nation building – hence the reluctant support offered to the UN-sanctioned enforcement force, ISAF, in Kabul nine years later.

The 5,000-strong ISAF was created with a mandate to maintain a secure environment and increase public confidence to ensure a neutral political setting in which the future govern-

ment of Afghanistan could be settled. Its ROE were based on Chapter VII of the UN Charter, which allows the use of force in dealing with threats to peace and acts of aggression as well as self-defence. But its precise role was ambiguous; it was defined only in terms of providing assurance as a positive symbol of international commitment, and it neither kept the peace nor provided security, which is an Afghan responsibility. And its leadership, resources and future were complex and controversial. During its three-month command in early 2002, for example, the UK supplied 1,800 troops, while Germany sent 800, France 550, Italy 300, Spain 300, Greece 100 and the Netherlands 100. Other contributors included Austria, Belgium, Bulgaria, Denmark, Finland, New Zealand, Norway, Portugal, Romania, Sweden and Turkey. Although few countries were unwilling to provide additional troops, most struggled with the logistics of maintaining troops in Kabul, and all required US logistical support, especially in terms of the large transport aircraft that would be critical if quick evacuation proved necessary. They also needed US assistance for intelligence and rapid reaction support. The USA, meanwhile, made it clear that while it wished to be responsible for training a genuine national army it had no intention of joining ISAF; this reflected its distaste for 'constabulary' duties or nation building. The Bush administration effectively said the US role was to bomb, not patrol. In return European officials argued that bombing was the easy task; that the difference between bombing and peacekeeping is that civilian casualties are inevitable with the former whereas the latter depends on the judgement of individual soldiers in a high-profile role in which they are potentially exposed to risks not experienced by pilots. The disagreement is indicative of deeper rifts that re-emerged later after the war in Iraq, and will no doubt be influential in shaping future urban enforcement operations.

The ISAF operation does not appear to have been significantly affected by the urban environment though security remains a significant problem, especially outside Kabul – ISAF was confined to Kabul in an attempt to avoid dangerous escalatory situations. Even so, the presence of former militia, al-Qaeda and Taliban fighters represent potentially destabilising factors in Kabul, as do the easy availability of weapons, factional power struggles and the erratic payment of the Interim Administration's troops

and police. The military nature of the challenge is evident from the fact that, in June 2002, ISAF was divided into UK, German and French-led battle groups; that is, battalions with ancillary units, such as engineers, attached. Despite this ISAF was heavily criticised for its weakness, for it was essentially a police force, equipped only with light weapons and armoured Land Rovers.

Tactical Skills

The political and operational constraints evident in enforcement operations against unconventional or irregular adversaries in Somalia and Afghanistan raise a number of questions in relation to the West's understanding of urban operations, the most important of which concerns the centrality traditionally allocated to tactical-level knowledge and skills. The Israeli researcher Dov Tamari, for example, argues that traditional high-intensity urban war is 'difficult but ultimately tractable' whereas 'the tactical field of knowledge' has little to offer contemporary conflicts, which require new concepts to achieve innovative means of power projection or the separation of an adversary from non-combatants.[20] To some extent this is undoubtedly true – a major theme in this book is that urban operations require a coherent strategy as much as proven tactics. But strategies must also acknowledge the proven characteristics of the urban environment, which manifest themselves at the tactical level. The picture is thus more nuanced than it appears. It may be argued that recent developments in the Israeli–Palestinian conflict support Tamari (such conflicts require political rather than military solutions), but it is also probable that the Sharon government chooses to use conventional tactics to contain, rather than resolve, the conflict so as to consolidate territorial objectives. Hammas gains from continuing conflict too.[21] The debate concerning the best way to deal with operations against an asymmetric adversary in the aftermath of 11 September 2001 is similarly complex.

Asymmetry

A prompt for the claim that tactical knowledge should no longer be central has been the priority now accorded to the 'asymmetric'

adversaries (which the West usually understands as non-state actors, such as Mohammed Aideed or Osama bin Laden) and unconventional means of operation, against which professional armies are thought to be disadvantaged. Asymmetry tends to be defined in terms of actions at variance with prevailing operational conditions and which avoid conventional engagements. There is, of course, nothing new about this – militaries have always sought to pit their strength against an adversary's weakness – but the formal identification of the notion and its development is recent. So too is the concern to develop tactics and strategies to deal with it. As Thomas notes, this tells more about the West's state of mind than that of any adversary; contemporary definitions concern perception rather than a form of war.[22]

Asymmetric threats are invariably seen in relation to a potential opponent's operations or actions that do not abide by the rules the West or international law sets, or are against US interests or forces even though the USA is arguably the world's most asymmetric military force. British orthodoxy is equally conventional, with the British *Future Army Concept Paper* stating that whereas symmetrical combat concerns like forces, asymmetric combat is between forces that differ in their political intent, strategic objectives, doctrine and ways of fighting, including tactics and equipment.[23] Thomas suggests that asymmetry is more usefully understood as relating to variables such as the capabilities of certain forces, a nation's reliance on particular systems, and the cultural values that shape a nation's response. He compares Western definitions with those of Russia and China, pointing out that the Russian definition of asymmetry – 'the absence or destruction of symmetry' – reflects a dialectic of thesis and antithesis that encourages analysis from a different, more confrontational, perspective. And he refers to the work of an Australian officer, J. Frewen, who links today's imprecision to the contemporary expansion of national security to areas in which armed forces have few capabilities and in which the definition of 'decisive force' is unclear. Significantly Frewen notes that asymmetric vulnerabilities are not accessible to hardware solutions; problems in Somalia were not caused by a lack of armoured vehicles so much as the failure to understand the environment. Even so, this does not mean that tactical knowledge is unnecessary so much as that it is not sufficient and that conventional approaches

based on technological superiority may hinder an understanding of changing circumstances. The need for a coherent and comprehensive strategy stands.

Multiple missions

The emergence of non-state adversaries conducting unconventional operations emphasises the need for both coherent strategies and tactical knowledge. But the balance between the two is in practice variable because (with the exception of ISAF, with its focus on static security) most contemporary enforcement operations include multiple missions and, therefore, multiple transitions, which depend on professional (that is, tactical) skills.

Multiple missions demand multiple transitions. The speed with which urban operations can escalate makes this a critical challenge. Some aspects of the transition from combat are comparatively straightforward. Demonstrating a powerful military presence through the use of tanks, aircraft and high-mobility multipurpose wheeled vehicles (HMMWV) was easy in Mogadishu. But US troops in particular appear to have found the changing constraints of ROE as frustrating and confusing as had their predecessors in Lebanon (1958, 1982–84), Grenada (1983) and Panama (1989). Downward transitions were especially difficult, with the most awkward shift being that from warrior to policeman, especially when this involved dealing with non-combatants, as in traffic control or patrolling – multiple incidents involving the deaths of Iraqi civilians in 2003 suggest the problem has yet to be solved.[24] The range of possible roles can best be placed by reference to the account of a participant in Operation Just Cause in Panama City. This was not an enforcement mission, but the problems associated with the multiple missions it required were identified at the time, shaped the institutional memories of officers in Mogadishu, were relearned in Mogadishu, and are indicative of what could be involved in the future. Operation Just Cause was executed in response to a declaration of war by the National Assembly of Corregimiento. The overall US mission was to secure the area from pro-Noriega forces and to restore law and order. In the event, five task forces simultaneously attacked 27 major targets and gained operational control of Panama City; every major military installation was hit or blocked, and all major

reinforcement routes were stopped. Its relevance here lies in the record of Clarence Briggs, who tells how this required him and his fellow paratroopers to perform five separate missions and multiple transitions.[25] Before deployment to Panama they were 'gamesters', training for possible contingencies. When his company arrived in Panama to undergo further training they became 'agents', asserting US Panama Canal Treaty rights. With Operation Just Cause, the mission for which they were trained, the men became 'warriors'. But the combat phase of Just Cause lasted for only two or three days, after which they become 'constables', responsible for re-establishing law and order. The men finally became 'guardians, charged with providing national assistance to Panama's government and people'. In other words, while the warfighting role was straightforward, that associated with restoring law and order was not. As another participant recorded, this was 'a mission for which none of us had ever trained'.[26]

In one respect, Operation Just Cause is more typical of contemporary operations than Mogadishu, with its sharp closure. For, rather than mark the end of operations, its termination marked the beginning of a second series of operations in which transition was from the primarily political to the more military to the primarily political.

Tactical values

The real value of questioning the significance of tactical knowledge (as opposed to affirming the importance of strategic coherence) is that answers are indicative of the way in which urban operations are understood and assessed. Operations in cities continue to be understood as a predominantly tactical challenge. Thus American tactical skills ensured the Mogadishu operation was a military success – but President Clinton judged 18 American deaths too high a price to pay. More recent operations associated with the 'War on Terrorism' have also been seen as a tactical problem, though their political implications are evident and their potential costs are seemingly accepted on the basis that the military destruction of the USA's enemies is essential. More generally the operations referred to throughout this book show that, while military success cannot guarantee political success, political

success remains tightly linked to military success – and military success in cities depends primarily on tactical experience and professional judgement.[27]

All the operations mentioned here confronted tactical challenges. Mogadishu had inflammable shanties and crowded narrow alleys that channelled movement; Panama City had ten-storey apartment complexes; banditry and drug running threaten security in and around the rubble of Kabul. In other words, tactical knowledge remains a reasonable and necessary guide as to what is possible. Even so, it needs to be used judiciously. That US forces were already stationed in Panama and had been training there for years gave them great advantages in 1989; they finished fighting their poor-quality adversaries in a few days. But this made it easy for them to underestimate Somali abilities three years later. As a result, they were effectively obstructed or unbalanced by inexperienced fighters using primitive tactics. Somali fighters were barefoot but they managed to keep up with the Americans in their vehicles and helicopters by their use of swarm tactics and roadblocks. Gunmen, by running through streets parallel to the truck convoys, were able to ensure that the US convoys had to fight from ambush to ambush. However, that Somali improvisation negated US technological advantage does not mean that tactical knowledge is no longer critical so much as that such operations demand high levels of tactical knowledge and military judgement if they are to fulfil political objectives.

Tactical achievements cannot guarantee political success – too many variables are present – but political objectives are probably best achieved by coherent strategies built on the tactical art of the possible. The implications of this are important because recent Western operations suggest that the imbalance symbolised by asymmetry represents an analytical, conceptual and doctrinal challenge to the current tactical emphasis of urban operations that is yet to be fully addressed. It is difficult to see how conventional military forces can directly engage with, for example, the threat presented by al-Qaeda's proposed targeting of what it calls Western 'tools to fight Islam'. These are the UN, Muslim regimes working with the West, multinational corporations, international communications and data exchange systems, international news agencies, satellite media channels and international relief

agencies.[28] It is difficult to relate tactical success to something that may relate to ends (political intent or economic goals), or ways (opportunities and constraints) or means (tactics or scale, psychological or physical). This does not, however, mean that the nature of urban operations has changed in some way. The tactical field of knowledge still provides a key to the dynamics of contemporary operations in cities, including those of enforcement, not least because there is as yet no evidence that military force is redundant, least of all in the developing world. Tactical skills remain necessary in cultures that respect only force, and the fact that low-technology guerrillas have a marked advantage in cities places a premium on the West's tactical knowledge. Such knowledge cannot ensure strategic success but, if the worst comes to the worst, it can ensure that Western forces are still standing at the end of an operation.

Notes

1. What makes peacekeeping impartial (as opposed to neutral) is that theoretically it neither supports nor discriminates against a designated enemy. Its intention is to enforce compliance with the operation's mandate and to create a secure environment in which civilian agencies can create a self-sustaining peace rather than enforce a short-term military success.
2. Mafia-style leaders such as Arkan were notorious in Belgrade. Compare A. McDermott and K. Skjelsbaek, *The Multinational Force in Beirut 1982–1984* (Miami, FL: Florida International University Press, 1991); M. Frost, 'Security Operations SOP: A Rifle Company in Bosnia', *Infantry*, 89: 1 (1999), p. 27.
3. See M. Neiman, 'Urban Operations: Social Meaning, the Urban Built Form, and Economic Function', in M. Desch (ed.), *Soldiers in Cities: Military Operations on Urban Terrain* (Carlisle, PA: Strategic Studies Institute, US Army War College, 2001), p. 159.
4. R. Spiller, *Sharp Corners: Urban Operations at Century's End* (Fort Leavenworth, KS: US Army Command and General Staff College, 2001), p. 71.
5. An outline of events, 1991–93, can be found in Joint Staff, *Handbook for Joint Urban Operations* (Washington, DC: 2000), pp. IV-29–33. It was not transferred to Joint Publication (JP) 3-06, *Doctrine for Joint Urban Operations* (2002). The most compelling account of the October 1993 firefight that prompted the US exit from Somalia remains that of M. Bowden, *Black Hawk Down* (New York: Atlantic Monthly Press, 1999). For an account of the fight

from the company-level perspective see C. Ferry, 'Mogadishu, October 1993: Personal Account of a Rifle Company XO', *Infantry*, 84, 5 (1994), pp. 23–31. For a platoon-level account see M. Hollis, 'Platoon under Fire: Mogadishu, October 1993', *Infantry*, 88, 1 (1998), pp. 27–34. For additional information from the strategic, operational and tactical levels, including medical support and logistics, see R. Glenn, *Capital Preservation: Preparing for Urban Operations in the Twenty-first Century* (Santa Monica, CA: RAND, 2001), pp. 309–574; S. Edwards, *Mars Unmasked: The Changing Face of Urban Operations* (Santa Monica, CA: RAND, 2000), pp. 11–8.

6. Bowden, *Black Hawk Down*, p. 46.
7. See, for example, Center for Army Lessons Learned (CALL), *US Army Operations in Support of UNOSOM II: Lessons Learned Report* (Fort Leavenworth, KS: US Army Combined Arms Center, 1994).
8. Ferry, 'Mogadishu, October 1993: Personal Account of a Rifle Company XO', p. 29.
9. Edwards, *Mars Unmasked*, p. 9.
10. Bowden, *Black Hawk Down*, p. 11.
11. Ferry, 'Mogadishu, October 1993: Personal Account of a Rifle Company XO', p. 26. See also C. Ferry, 'Mogadishu, October 1993: A Company XO's Notes on Lessons Learned', *Infantry*, 84, 6 (1994), pp. 31–8.
12. See P. McGowan, ' Operations in Somalia: Changing the Light Infantry Training Focus', *Infantry*, 83, 6 (1993), pp. 23–5.
13. For a damning indictment see A. de Waal, *Famine Crimes: Politics and the Disaster Relief Industry in Africa* (Oxford: James Currey with Indiana University Press, 1997), pp. 186–8.
14. See R. Patman, 'Beyond "the Mogadishu Line": Some Australian Lessons for Managing Intra-state Conflict', *Small Wars & Insurgencies*, 12, 1 (2001), pp. 59–75; M. Kelly, *Peace Operations: Tackling the Military Legal and Policy Challenges* (Canberra: Australian Government Publishing Service, 1997). Compare G. Prunier, 'The Experience of European Armies in Operation Restore Hope', in W. Clarke and J. Herbst (eds), *Learning from Somalia: The Lessons of Armed Humanitarian Intervention* (Boulder, CO: Westview Press, 1997) pp. 139–41.
15. The Bush administration had been keen not to interfere in Somali affairs, fearing that a policy of active support for policing or disarmament would be expensive and would provoke confrontation with the main faction leaders. For policing see M. Ganzglass, 'The Restoration of the Somali Justice System', *International Peacekeeping*, 3, 1 (1996), pp. 113–38; L. Thomas and S. Spataro, 'Peacekeeping and Policing in Somalia', in R. Oakley, M. Dziedzic and E. Goldberg (eds), *Policing the New World Disorder: Peace Operations and Public Security* (Washington, DC: National Defense

University Press, 1998), pp. 175–214. Significantly, a recent example of successful US operations – in the Iraqi city of Kirkuk – appears to be based on the nuanced version of martial law provided by a brigade commander. Street patrols were organised, with a multi-ethnic police force operating alongside US troops. The provision of water, electricity, food and pay for workers in refineries, schools and health care was treated as a priority. See 'Kirkuk's fortunes: success story', *The Economist*, 17 May 2003.

16. Huband, *The Skull Beneath the Skin* (Boulder, CO: Westview, 2001), p. 295.
17. de Waal, *Famine Crimes*, p. 184.
18. Huband, *The Skull Beneath the Skin*, p. 293f.
19. Huband, *The Skull Beneath the Skin*, p. 292. Peacekeeping is always a business opportunity and most Western operations offer opportunities, particularly in relation to reconstruction. Rebuilding was not a priority in Somalia but it was in the Balkans. The 30,000-strong NATO peacekeeping force in Kosovo, for example, produced rapid orders, but many businesses saw Kosovo primarily as a launch pad for work elsewhere in the region. In the summer of 1999 the cost of rebuilding Kosovo was estimated at €5billion whereas that for Serbia, which suffered more damage, was thought to be between £30 billion (€50 billion) and £100 billion. See 'Picking up the pieces', *Financial Times*, 13 July 1999. Compare L. Wesseling, *Fuelling the War: Revealing an Oil Company's Role in Vietnam* (London: I. B. Taurus, 2000). Linked to this is the increasing dependence of the US military on contractors such as Dyncorp and Halliburton. See N. Schwartz, 'The Pentagon's Private Army', *Fortune*, 3 March 2003, (www.fortune.com).
20. Tamari, 'Military Operations in Urban Environments: The Case of Lebanon, 1982', in Desch, *Soldiers in Cities*, pp. 49–51.
21. See 'Towards a War of Attrition', *The Economist*, 10 August 2002.
22. Asymmetry is perceptively analysed in Thomas, 'Asymmetric Threats and Attacks: Deciphering the Word Game', *Military Review*, 81, 3 (2001), pp. 32–7. Thomas refers to definitional work by Matthews, Metz, Johnson and Grange. Matthews defines asymmetry as any militarily significant disparity between contending parties that obstructs or prevents a state of symmetry. Metz and Johnson suggest it is 'acting, organizing or thinking differently than opponents in order to maximise one's own advantages, exploit an opponent's weaknesses, attain the initiative'. It can be short- or long-term, deliberate or by default, discrete or pursued in parallel with symmetrical approaches, and can have both psychological and physical dimension. Grange considers asymmetry as best understood as a strategy, tactic or method of warfare, deviating from a norm, or an indirect approach aimed at counterbalancing force. Compare S. Metz, 'Strategic Asymmetry', *Military Review*, 81, 4 (2001), pp. 23–31.

23. See D. Barley, 'Are We Prepared for the Challenges of Future Operations in the Urban Environment?', *British Army Review*, 125 (2000), pp. 16–25.
24. Representative (UK) reports include 'Tensions high as US forces kill up to 13 civilians', *Financial Times*, 30 April 2003; 'Iraqi cities seethe as trigger-happy troops blow away local goodwill', *Sunday Times*, 4 May 2003.
25. C. Briggs, *Operation Just Cause: Panama, December 1989* (Harrisburg, PA: Stackpole Books, 1990). For a full account of the operation see T. Donnelley, M. Roth and C. Baker *Operation Just Cause: The Storming of Panama* (New York: Lexington, 1991). Although an operational success, the US invasion of Panama represented a strategic failure. The situation in 1989 had become one of prolonged crisis that received attention only when it had reached a dangerous state. Once it was clear that the Bush administration had failed to remove General Noriega it had no option except to use military force.
26. R. Boyko, 'Just Cause: MOUT Lessons Learned', *Infantry*, 81, 3 (1991), pp. 28–32.
27. That it also requires awareness of cultural and other non-military variables is acknowledged by intelligence preparation of the battlefield (IPB). Ideally IPB integrates enemy doctrine with the weather, terrain, civilians and so forth, and relates such factors to the mission and battlefield situation. For US IPB doctrine see FM 34-130, *Intelligence Preparation of the Battlefield* (HQ, Dept. of the Army, 1989), p. 4-1. A classic example of what happens when such factors are dismissed is evident in the IDF's response to a Palestinian sniper who, armed with an obsolete rifle and positioned near an Israeli checkpoint in the West Bank in March 2002, picked off ten Israelis. Israel struck back the next day with air and tank assaults on the West Bank that left at least four Palestinians dead. A Palestinian police post was among the targets of missile strikes by helicopter gunships.
28. See R. Gunaratna, 'Confronting the West: Al-Qaeda's Strategy after 11 September', *Jane's Intelligence Review* (July 2002), pp. 27–9.

6 Warfighting

When Europeans think of war in cities they tend to think in terms of a Stalingrad or Berlin. The dramatic images of the Second World War may no longer be omnipresent but the popularity of films such as *Saving Private Ryan* and the success of books such as Anthony Beevor's *Stalingrad* (more than half a million copies sold in four years) are evidence of the concept's continuing power. It is reinforced by the imagery associated with the most recent battle of Grozny, which involved thousands of casualties, desperate refugees, swaggering Chechen fighters and the devastation of an industrialised city.[1] The Mogadishu firefight of 1993 involved thousands of Somali fighters and civilians, and the bombing of Baghdad ten years later produced harrowing images, but Grozny represents war on a different scale and to different criteria. It is this extreme that is now considered.

Urban wars in which operations attain high intensity over extended periods of time represent archetypal urban operations. They are, however, rare. Before the Iraq war the West had not seriously thought through, let alone conducted, sustained urban war for decades (the last case was Hue, 1968), and it has long been assumed that there is no need to prepare for operations on the scale of a Grozny – which, it has often been said, the West shall never again fight. The conviction can only be reinforced by the battle for Baghdad in 2003, which involved a number of small battles, rather than climactic and extensive fighting.[2] Yet

urban war deserves consideration because it is an ideal that defines the fundamental characteristics of war itself. Urban war is not fundamentally different from that in other environments (as Chapter 1 noted, command and control requires the same preparation), but the problems it presents are magnified. Its strategic grammar results from cities acting as multidimensional magnifying glasses in terms of complexity, and the speed and scale of change. Problems develop more rapidly, operations are more resource intensive, and the political consequences of inappropriate decisions, whether by ministers or corporals, are potentially more serious and irreversible. The imagery of force protection and destruction is stronger, and the closeness of the environment increases proximity to – and possible compromise by – non-combatants. In other words, all operational problems are accentuated.

Urban war captures the enduring characteristics of warfighting, and it challenges liberal assumptions that the nature of military force has in some way changed in recent years. This is important because there is as yet no sign of urban war transitioning into a fundamentally new phase in which technological advance or conceptual innovation can negate the known characteristics of cities or the advantages belonging to intelligent adversaries. And there is no evidence of a fundamental reassessment of Western strategy. Recent operations in Iraq do not challenge this book's premise of evolutionary or incremental (rather than revolutionary or transformational) change; neither do technologically sophisticated coalition operations in Afghanistan or Israel's operations in the West Bank and Gaza Strip. Indeed, Najaf's suicide bombers and Jenin's booby traps could yet prove more typical of future war than overwhelming integrated air assets.

Urban War

In its search for the global roles and meaningful purposes that today's expanded definition of security and 'new war' articulates,[3] the West runs the risk of paying insufficient attention to war's unchanging nature. The pursuit of precision or humanitarian forms of war, designed to make operations relatively cost free, or to alleviate the suffering of a people while attacking the enemy

embedded within them, makes it easy to ignore or disguise the continuing relevance of past experience. For this reason alone urban war deserves attention. Three vignettes, from 1945, 1991 and 2002, act as reminders of the unchanging dynamics of urban war:

- (1) When the Allies crossed the Rhine in March 1945, the destruction was so great that rubble and masonry often prevented their advance.[4] Wesel, for example, was a smoking ruin from which the population had fled. The advancing forces had three immediate priorities: security, displaced persons and public health. Any German wearing a uniform was imprisoned; no one could be expected to distinguish between postmen, foresters, police and soldiers.[5] Preparations had to be in place for displaced persons, especially when, as in the heavily blitzed Osnabrook, they were busily looting; order was restored only when a military government detachment used its revolvers and imposed a 24-hour house arrest on the entire population. Public health was a serious problem. Most of the 60,000 population was living in cellars; lice, scabies, the sick and wounded had to be managed, and there were fears of typhus. The town water supply was, when functioning, heavily contaminated with sewage. The situation in Hanover was similar. The city was three-quarters destroyed, with no electricity, water or functioning sewers. Some half a million people inhabited the ruins: 'It was a town of looting, drunkenness, rape and murder as forced labour took its revenge.'[6]
- (2) In 1991 Serb forces destroyed the small Croatian town of Vukovar. The town centre was subject to sporadic bombardment from early August onwards, by which time only 15,000 of the original 50,000 population remained (there was no attempt to evacuate civilians).[7] By October most were living in communal shelters, some housing up to 700 people. A crisis committee organised the distribution of food and supplies so as to minimise the number of civilians on the street at any one time, but bombardment and two weeks of hand-to-hand fighting meant that hundreds of bodies remained uncollected in the last days of the siege. The town was levelled, house by house.
- (3) In April 2002 the Israel Defense Force (IDF) used 50-tonne armoured D-9 Caterpillar bulldozers to demolish hundreds of

houses in the middle of a Palestinian refugee camp in the small town of Jenin.[8] Palestinians claimed that some houses were destroyed while occupied. It may be that after fierce fighting and a strict curfew many Palestinians had been too afraid to leave their houses even when they understood what was happening. The IDF insisted that it tried to limit casualties during its intensive battles with gunmen but many non-combatants were evidently killed or injured during the fighting. What is clear is that the operation (Operation Defence Shield) was driven by extreme emotions and survival imperatives on the part of both adversaries. Only a few weeks before, Ariel Sharon had told his ministers: 'We are in a hard war against a cruel and bloodthirsty enemy … We must cause them losses, casualties … so that they understand they will gain nothing by terrorism.'[9] The Palestinian mood, meanwhile, was described as one of *sumud*, an Arabic term meaning a steely alloy of resilience and resistance. Old divisions evaporated and Fatah and Hamas fought together: 'We have nothing left to lose.' The informal rules of fighting had long permitted Palestinians to booby trap cars and buildings, but the insides of houses were usually safe for IDF forces. This changed in Jenin when the interiors of inhabited houses were booby trapped. As Clausewitz noted, war is moved by 'primordial violence, hatred and enmity'.[10]

Warfighting

The most effective tactics for urban warfighting appear remarkably consistent across the decades, suggesting that incremental or evolutionary change is more typical than sharp shifts or transitions. Close combat remains, as IDF reservists picking their way through the booby-trapped alleys and houses of Jenin discovered, pre-modern in nature – it is significant that technology for close combat has advanced more slowly than that for precision war, making close combat increasingly attractive to the West's adversaries.[11] This may account for the marked ambiguity of Western approaches to urban war. Governments refer to 'precision munitions' and 'surgical strikes' but most armies stress the squalor and destructiveness of war and the enduring importance of warfighting capabilities, referring to street fighting as an

aggressive, slow and dangerous business. The strategic environment in which operations take place, however, has changed. Yet it may be that this does not matter; all agree that urban war is a great equaliser, with morale a critical factor. A small, highly motivated enemy can usually hold larger well equipped forces at bay. Thus fighting between the Palestinian Islamic Jihad and IDF lasted for nine days in Jenin, while the Croats defending Vukovar in 1991 held their own against the Serbs during the two-month siege even though they were outnumbered by about 10:1 and lacked heavy weapons. The al-Qaeda fighters in the cave complexes of Tora Bora (who were well trained soldiers rather than terrorists) displayed similar tenacity. The fragmentation of the Iraqi Republican Guard and loyalist resistance after initial defeats in Baghdad in 2003 reaffirms the importance of determination. It is probable that success in urban war continues to be as tightly linked to morale and the issues at stake as it is to the style of fighting or resources employed.

In truth it is difficult to judge the extent to which urban operations are evolving because, at the time of writing, coalition forces have little experience of sustained and widespread urban warfighting. Operation Iraqi Freedom lasted three weeks, and the battle of Baghdad a matter of days. The skill and speed with which US forces took Baghdad was impressive, and there were incidents of fierce fighting, but mass battles across the city's 15 square miles did not take place, and the operation had more in common with a pacification campaign than a Grozny. British forces fought Iraqi irregulars in the streets of Umm Qasr and Basra, but they have not conducted unrelenting and protracted urban war against skilled professionals for 60 years. New styles of warfare tend to develop in response to the difficulties associated with specific operations, but there have been insufficient urban wars to accelerate the process. Take the case of the air–land balance. After the US-led air war of 1991, it was thought that in future campaigns land forces would be introduced only after enemy forces had been devastated from the air. Eight years later the NATO bombing campaign against Serbia used a much bigger proportion of smart bombs, which again made it seem possible that airpower alone could win a war. In Afghanistan there was an innovative synchronisation of land and air power, with US and UK Special Forces and their local allies using observation

points near battles to call in US bombers. But none of these operations involved systematic street fighting. Operation Iraqi Freedom built on the technological developments seen in Afghanistan to produce a new level of jointness, in which air and land forces worked together to make close air support in cities a reality, yet many commentators argue that such operations represent the perfection of old forms of war, rather than an indication of a new one. Tanks, artillery and radios were the key technologies in the battle for Baghdad, and military professionalism was arguably the critical factor.[12] In the absence of evidence from new sustained and widespread urban wars it appears safest to assume that little of a fundamental nature has changed and that the central characteristics, tactical constraints and moral dilemmas of war are relatively unchanged.

Dominant historical trends

A survey of urban war over the last 60 years suggests three linked and dominant trends. They concern

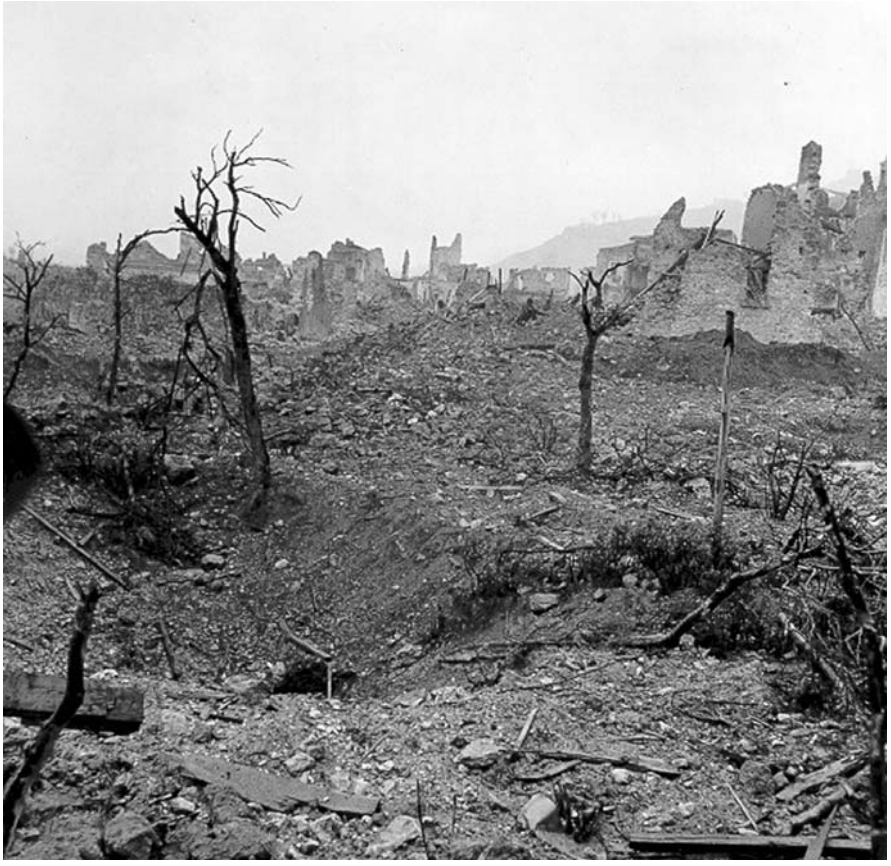
- the tenacity defending forces usually display,
- the advantage that accrues to the side with least regard for civilians,
- the increasing irrelevance of restraint in the face of heavy losses.

As a result the central dilemma confronting democracies appears to be that of identifying the proper balance between protecting one's own forces and avoiding excessive collateral damage. Or, to put it another way, of identifying the point at which a new ruthlessness is inevitable. This is not to suggest that the need for force protection makes ruthlessness inevitable. It acts rather as a reminder that historical experience suggests that restraint is invariably disregarded or relaxed once own casualties mount.

The experiences of Russian, US and Israeli forces are remarkably similar in this respect.

- (1) Before the 31 December 1994 assault on Grozny, the Russian defence minister was quoted as saying that he would

1. Stalingrad, *c.* 1943. (US DoD)



2. Monte Cassino, April 1944. (US Army)

3. Berlin, August 1945. (US Army)

4. Hue, 1968. (US DoD)

5. View of Crater, Aden Town, from the south, *c.* 1965. The Main Pass is in the background. (*British Army Review*)

6. The ruins of Vukovar after the 1991 siege. (T. Ripley)

7. US forces patrolling in Mogadishu, 1993. (US DoD)

8. Combat support in Grozny, 1995. (*British Army Review*)

9. A foot and mobile patrol from Imjin Coy, IRGBW, Kosovo, 1999. (UK Headquarters Land Command)

10. Soldiers from the US Army's 504 Parachute Infantry Regiment and UN police conduct a house-to-house search for weapons in Mitrovica, Kosovo, February 2000. (US DoD)

11. An ISAF vehicle negotiating the narrow streets of Kabul, Operation Fingal. (UK MoD)

12. A soldier from 7 Regiment Royal Horse Artillery explains ISAF's mission with the help of an interpreter and a loudspeaker system, Operation Fingal, Kabul, 2002. (UK MoD)

13. Royal and US Marines advance in Basra, Operation Telic, 2003. (UK MoD)

14. An Irish Guard NCO watching a street corner in Az Zubayr, Iraq, Operation Telic, 2003. (UK MoD)

15. A heavy machine-gun team keeps watch over an area of Basra, Operation Telic, 2003. (UK MoD)

16. A British security checkpoint, to guard against paramilitaries during Operation Telic, 2003. (UK MoD)

never allow tanks and artillery to play a part in combat within a city. But the policy was abandoned when the Russian infantry began taking heavy losses; heavy firepower was soon employed to support mechanised infantry forces. Similar considerations would probably have applied to Western forces had they confronted a similarly determined adversary. In a 1997 article Kevin Brown asked whether the Russian military could have used less destructive measures in Grozny to drive out Chechen rebels in 1995 or, if it had been US Marines, whether the city would have been spared.[13] Based on the USA's battlefield record in Manila, Seoul, Hue, Panama City and Mogadishu, Brown concludes that the US response would not have been significantly different.

- (2) Before the battle of Manila in 1945, General MacArthur prohibited aerial bombardment, stating that 'The inaccuracy of this type of bombardment would result beyond question in the death of thousands of innocent citizens.'[14] He confined artillery support to observed fire on confirmed point targets, but these restrictions were lifted within days as US casualties mounted. Numerous cases of air bombardment and the strafing of civilians in support of US forces occurred towards the end of the war (an estimated 100,000 Filipinos lost their lives). A similar pattern was observable at the liberation of Seoul in 1950. US Marines enter the city under a restrictive fire plan; there was to be no artillery support except for directly observed targets and no close air support (CAS) at all. But the restrictions were quickly lifted in the face of heavy enemy opposition and CAS was widely used throughout the operation. About 65 per cent of the city was destroyed. Comparable considerations applied in Hue in 1968. Heavy artillery, bombs and napalm were prohibited when the Marines entered Hue City because the Army of the Republic of Vietnam (ARVN) commander requested that damage to civilians and an historic city be minimised. But the policy was abandoned as soon as US casualties grew, and 40 per cent of the city was damaged. Significantly, heavy artillery and CAS proved to be a crucial factor for success. Their use does not violate strict rules of engagement (ROE) as such, but it is indicative of the dynamics of operations. The rule of minimum power was also invoked when lightly armoured US forces deployed to Somalia in 1992.

Initially great restraint was shown, but by late summer of 1993 civilian casualties were effectively disregarded. More recently, Operation Iraqi Freedom has seen incidents similar in nature. They may not infringe ROE – shifts are invariably justified in terms of an inherent right of self-defence – but they are suggestive of how operations in Baghdad could have developed if Iraqi resistance had been fierce, weapons of mass destruction used, or human shields systematically employed. The deaths of Americans in a car bomb at a checkpoint outside the town of Najaf, and in fierce fighting against Fedayeen Saddam (a group of fighters under the control of Saddam Hussein's eldest son) in Nasiriya during late March 2003 reportedly made it easy for troops to get permission to target civilian vehicles.[15]

- (3) In early April 2002, strict ROE guided IDF operations against the refugee camp outside the town of Jenin; the use of artillery or mortars was banned. But the ROE allowing IDF soldiers to open fire only on legitimate targets (armed militants) were relaxed as Israeli casualties rose.[16] Once 23 IDF soldiers were killed (including 13 during an elaborate ambush on 9 April), a decision was taken to crush the Palestinian fighters. Heavy shelling was followed by the use of tanks and bulldozers to destroy the centre of the camp.

Each of these battles was distinguished by the tenacity and ruthlessness of defending forces. It is, however, difficult to assign blame for the ensuing lack of restraint, for the point at which casualties become unacceptable depends on the nature of the war. Hence the discrepancy between the US acceptance of potential casualties in the Gulf War of 1991 as against its withdrawal from Somalia after CNN showed a dead US airman being dragged through Mogadishu.[17] Hence too the seeming acceptance of casualties in the second intifada:

> the asymmetric character of the fighting leads Israel and the US to focus on 'terrorism,' and the Arab and Islamic worlds and most of Europe to focus on 'excessive force.' The reality that both sides are employ [*sic*] what they regard as the best tactics available, with equally legitimate (or illegitimate) results is being lost.[18]

The continuing strength of such factors suggests that urban operations have not experienced a transformational shift in recent years.

Transitional Wars

In the aftermath of 11 September 2001, the Bush administration asserted that the USA was waging an unconventional strategy in a 'new kind of war'. General Myers, chairman of the Joint Chiefs of Staff, echoed this when he said that 'In this war we the military may not play the decisive role' because destroying al-Qaeda would be like destroying an organised crime syndicate.[19] Defense Secretary Rumsfeld reinforced the message of new war when he cautioned that success in the military campaign in Afghanistan could not be measured in terms of territory seized from the Taliban.[20] His officials meanwhile stressed that bombing (air superiority was declared after three days) was only the opening phase in a multidimensional conflict – necessarily so given that Afghanistan has few points of obvious military or political significance.

Rumsfeld argued that the combination of new and existing capabilities seen in Afghanistan holds the key to a transformational leap in warfare: 'Coalition forces took existing military capabilities from the most advanced laser-guided weapons to antique 40-year-old B52s – and also to the most rudimentary, a man on horseback. And they used them in unprecedented ways.'[21] The successful use of sophisticated surveillance technologies, unmanned vehicles and lighter, more agile land forces in Operation Iraqi Freedom two years later appeared to confirm his claims. That war is in the process of a transformation may prove to be the case, yet a note of caution is necessary as far as urban operations are concerned. The USA had the same capabilities and personnel after 11 September as it had before, and many familiar problems were evident in Afghanistan and Iraq.

Significant trends

Although coalition operations in Afghanistan did not involve cities, they did involve days of intense close fighting between

several hundred Afghan and US forces and al-Qaeda forces in early 2002: Afghanistan was not a virtual war won by technicians. More importantly, Afghanistan suggests trends likely to influence future urban operations and these deserve note. According to FBI reports, for example, al-Qaeda's training regime included instructions on how to carry out operations in cities, how to block roads and assault buildings, as well as how to handle light weapons, machine guns and rocket-propelled grenades (RPGs), and cell management.[22] In the event, there was nothing comparable to the 1992 destruction of Kabul's residential and business quarters when tens of thousands were killed as former allies fought for the control of the capital. This may itself represent a trend. In Kunduz, where several thousand Taliban troops were surrounded, half the civilian population was estimated to have fled the week before some 2,000 soldiers loyal to the Northern Alliance mounted a final assault on the city. But the fierce fighting in Kunduz effectively raised other, more divisive, questions about the treatment of al-Qaeda fighters and US obligations under the laws of war that could become prominent. And it reinforced the note of ruthlessness underpinning the operation: Defense Secretary Rumsfeld said the USA was not in a position to take prisoners and that he hoped foreign fighters would not be allowed to return to their countries.[23] The Pentagon spoke of pinpoint hit-and-run raids amid intense air attack and aerial surveillance, but operations against al-Qaeda and the Taliban remained reliant on the use of overwhelming force. In the event, Afghanistan did not see urban war, so the question of whether the USA would have used the equivalent of the fuel-air 15,000lb Daisy Cutter bombs it employed in Vietnam, the Gulf and the mountains of Afghanistan against a city remains open but, on past evidence, not impossible. More significantly, it was evident that the USA has no taste for sustained and continuous operations lasting years.[24]

Less controversial trends in Afghanistan included American predominance, its use of Special Forces (SF), proxies and 'willing' allies, and its balancing of old and new technology. But such trends do not equate to transformation; they suggest a rebalancing of existing approaches or resources. There was, for example, nothing momentous in the fact that the operation relied on lightly armed conventional infantry with helicopters, refocusing attention on

ground forces and the development of small, agile units. Similar reservations concern the US use of proxies, which allowed the USA to escape with light casualties and claim that the war was run by the Afghan government. More significantly, the war seemingly reconciled warfighting and technology in an internationally acceptable manner. Technically speaking airpower alone could have devastated Kabul or Kandahar, but this would have destroyed US claims to legitimacy in the eyes of both Afghans and most of the world. Instead, new combinations of aircraft, tanks or ships, and a nuanced use of low-cost technology that represents the continuance of trends seen during the Gulf War of 1990–91 and Operation Allied Force in Kosovo, marked the war in 1999.[25] These included the use of SF and intelligence personnel on the ground to provide real-time and near-real-time targeting-quality data, either through laser designators or by calling in global-positioning-system co-ordinates through radios or laptops to US aircraft flying overhead. The most commonly used munitions in the war were the precision-guided GBU-31 Joint Direct Attack Munitions (JDAMs). The Predator UAV was another low-cost winner. It not only watched elusive or fleeing targets but was also used as a strike weapon, delivering Hellfire missiles. Afghanistan thus clarifies the utility of some important trends, including ISR assets, long-range strike, including weapons and platforms, and increased data-link capabilities to tie them all together. It was not a virtual war in the Kosovo sense but it seemingly opens new possibilities for urban war that are compatible with liberal values.[26]

Yet it is difficult to conclude that operations in Afghanistan represent a new way of war. For all their sophisticated surveillance equipment, US forces had little idea of the strength and firepower of their well disciplined adversaries. The Joint Stars battlefield surveillance system did not solve the problem. Neither did the use of small elite groups of close combat soldiers whose purpose was to find and fix the enemy and allow precision weapons to do the killing. Precision strikes promised empty battlefields and worked well against massed targets in the open, but would probably have been less effective against the overhead cover and background clutter of cities such as Kabul or Kandahar. The Pentagon spoke of pinpoint hit-and-run raids amid intense air attack and aerial surveillance, but operations against al-Qaeda and the Taliban remained reliant on the use of overwhelming force.

Similar considerations apply to operations in Iraq in 2003. US Vice-President Cheney stated that war had been transformed; it was no longer necessary to fight urban enemies on traditional terms. It is undeniable that the combination of new technologies, special operations units and innovative tactics achieved the stunning successes that led to the fall of Baghdad; real-time surveillance and intelligence fractured the Iraqi regime, while precision munitions were used more widely and more impressively than ever before. Yet it is also clear that combined-arms operations, large land forces (the force was 250,000-strong) and professional military skills were as critical as ever. And it was the lack of sustained or effective Iraqi opposition that ensured the historically low level of casualties and collateral damage involved in the battle for Baghdad.

Operations in Afghanistan and Iraq produce no evidence to suggest that the fundamental nature or mechanics of urban war have been transformed, or that the ability of small insurgent-like forces to defeat a superior or experienced force should be easily dismissed. The technologies available to Western forces are impressive, but military skills, proven doctrine and morale are as important as ever. The fall of the strategically placed northern town of Mazar-i-Sharif and the movement of Northern Alliance fighters towards Kabul made clear what even loosely co-ordinated fighters could achieve. And American experience against the Fedayeen in cities such as Nasiriya suggests that the tactics that worked in Baghdad (such as dividing a city using key routes) will not necessarily work against well organised enemies. Indeed, it was not until US forces took Baghdad that fears of the battle degenerating into a Second World War ('Stalingrad') scenario finally receded. It is probable that a more accurate indication of urban war's potential is to be found in the battles for Grozny, in which Chechen fighters effectively defeated the army that arguably had more experience of urban operations than any other conventional force. In the 30 years after 1950, Soviets forces conducted operations in Berlin (1953), Budapest (1956), Prague (1968) and Kabul (1979). The operations were stability actions, rather than urban combat as such, but all involved street fighting and security activities typical of contemporary operations.

Grozny

The recent wars in Chechnya involved operations in many cities, towns and villages but the three battles for Grozny, a city of about 490,000 in 1994, represent urban war at its starkest. The first battle occurred in January 1995, the second in August 1996, and the third in January 2000.[27] In 1994 Moscow gambled on being able to beat the rebels into submission by conducting a ferocious high-tempo assault. The city was repeatedly destroyed in the process but the rebel core was displaced rather than crushed. In the summer of 2002 President Putin insisted that the 'military phase' of operations was over but up to 70,000 troops were still stationed in the region. Heavy fighting is now rare but military clashes continue, with dozens of Russian casualties reported each month. Reconstruction has barely begun. The Kremlin-backed government is weak, discredited and divided, while hawkish generals, rebels and criminals on both sides share an interest in preventing peace. Many of the armed groups and Islamic militants have no interest in taking power in Chechnya, a state they do not believe in, preferring a continuation of the sporadic violence that allows them to consolidate their own local power. And the roots of that chaos are deeply entrenched. Chechens made money from drugs, counterfeiting and hostages long before 1995; the multi-million dollar ransoms paid for some hostages helped create private armies even before Russian operations began, and arms were never a problem.

Much about the battles is undeniably unique. They were technically internal security operations, fought on Federation territory against bandits, mercenaries and criminals, rather than wars as such. Moscow referred to internal counterterrorist operations aimed at restoring constitutional order, for the Chechen drive for secession was viewed as a direct threat to the integrity of the Russian state – Grozny is part of a geostrategically important region. Moscow also took risks with ground troops that no Western government could afford in the belief that the decisive use of force could solve many problems. Even so, Russian experience is of direct relevance to urban war because it exemplifies its destructive, brutal, expensive and manpower-intensive nature.

Urban war is destructive. Russian forces addressed the three-dimensional nature of the urban environment by reducing it to

two. They appeared incapable of conducting large-scale operations without resorting to the indiscriminate use of massive firepower; artillery was often used to compensate for poor-quality infantry.[28] But destruction was also assured by the involvement of irregular forces whose political agenda was arguably enhanced by the destruction of cities. Eric Bouret, a French photojournalist, who was in Grozny in the spring of 2000, observed the results:

> In February when I entered Grozny, it was as if I was hit by an apocalyptic vision. In 20 years of covering wars I never had the occasion to feel like an astronaut landing on another planet. I had visited Grozny four times in the last war, but this time I couldn't even be sure where I was. Where Minutka Square – with its imposing buildings that lead to Lenin Avenue – once was nothing remained, just a huge, imposing void. The Russians had dynamited the city, leaving it totally in ruins.[29]

This is reminiscent of Stalingrad. So too is its associated brutality. Grozny was finally taken in 1996, after an unrestrained battle in which house-to-house fighting, amid ferocious artillery barrage and air attacks, resulted in massive casualties and wholesale destruction. Such destruction affected military discipline in the most negative manner, abetting brutality and atrocities against prisoners, the wounded and civilians. It was encouraged by the proximity of combatants and non-combatants, and stemmed from the ferocious, close-range and decentralised nature of the operation.[30]

Ironically such destruction is expensive. The costs of operations and the material destruction of 1994–95 have been estimated at US$9 billion.[31] Russia later claimed that this was higher than initially expected though still manageable. The 1999 war cost about 5 billion roubles (£106 million), compared to an original forecast of 3.5 billion roubles, though unofficial sources claimed that the war cost about $40–50 million a day during the last three months of 1999, representing a total for those months of up to 50 billion roubles ($2 billion). The direct cost of the 1999–2000 war was some 8 billion roubles (US$280 million a month) though much of this was spent on feeding, housing and

paying the 100,000-strong invasion force. Normally munitions and weapons are the most costly items of expenditure, but Russia had huge stockpiles left over from Soviet times so the costs were less than might be expected; Moscow's main expenses were fuel, transport, restoration work in occupied areas and the extra payments made to soldiers on active duty. It was also possible to reallocate a significant sum of international money to the war – which was, as ever, a business opportunity for some.[32]

The size of Grozny meant that operations were manpower intense. The operational group assembled to retake Grozny at the end of December 1994 numbered 38,000 troops, 230 tanks, 454 other armoured fighting vehicles and 388 guns and mortars. Troop numbers rose to about 50,000 or so in the following weeks but these were never enough to isolate or besiege Grozny's industrialised areas or huge suburbs of one-storey houses – the city covered almost 100 square miles. Traditional Soviet doctrine requires a 6:1 superiority on the part of the attacker, but a city like Grozny made it difficult for the Russians to amass such a force. Indeed, there were never enough troops to hold even captured buildings in the city centre. Fighting was often house-to-house, and buildings captured one day were lost the next; the Chechens repeatedly recaptured areas, often behind the Russian lines, making the supply of 'captured' areas difficult. This remained a problem even when Russian forces had an overwhelming superiority in numbers and firepower. In 1999 approximately 130,000 Russian troops were in the Grozny area at a time when Chechen fighters numbered about 3,000–5,000. But Russian forces were still dispersed over a large area, allowing Chechen fighters to employ hit-and-run tactics. The scale of the city swallowed the Russian forces.

Familiar lessons

The tactical lessons from Grozny would be familiar to Soviet veterans from the Second World War for, despite technological advances, it is evident that city fighting remains essentially unchanged at this level of intensity, regardless of whether conventional or irregular forces are involved; the boundaries between units (often in the same building) remain tactical weak points, and constant reconnaissance is still needed to hold a city.

It is this concern that lies at the root of current Western fears. Russian communications capabilities should have ensured great advantage but in practice they were offset by Chechen operating procedures and use of off-the-shelf equipment to intercept Russian signals, plan ambushes and avoid Russian offensives. More important, therefore, are the occasions on which the Russians did use technology with success against the rebels. One notable example involved the use of the RPO-A flame-thrower, a shoulder-launched single-shot disposable thermobaric weapon that can destroy a small building. The Russians called the weapon 'pocket artillery' and suggested it should be issued to every infantry battalion engaged in urban operations.[33] Precision-guided munitions dropped from aircraft were used with success too – in 1996 one killed President Dudayev when he was using his satellite telephone. Laser designation often presented practical problems in close fighting but when employed its accuracy made it devastatingly effective.[34] Helicopters were used to good effect for direct fire support, controlling indirect fire (in which the target cannot be seen by the gunner), rapid insertion of troops, supply and command and control, and the second war saw the first combat use of the KA-50 Black Shark attack helicopter (which can be compared to the controversial use of Cobra attack helicopters in Mogadishu in 1993). But Russian helicopters almost never dropped troops on rooftops, landed in city squares or provided CAS, and there are few reported instances of Russian air assets being used for reconnaissance. This suggests that Russian use was either constrained by fears of Chechens use of surface-to-air missiles, or that it is highly classified, or that Western aspirations are too ambitious for this type of war – oversight seems unlikely. The Chechens responded to Russian air power with heavy machine guns, RPG-7s and MANPADS, but although this restricted Russian freedom they never achieved strategic success comparable to that of the Somalis.

Lessons reaffirmed

It is precisely because urban operations remain difficult to sustain, let alone win, that cities are the most likely environment for a serious adversary to challenge Western influence or power. This suggests that analysis of the battles for Grozny could help identify

the dangers future multinational expeditionary forces could face in cities, not least because, during the 1994–95 attempts to recapture Grozny, Russian troops faced civil disturbances, guerrilla war, terrorism and insurgency. And everything in Grozny was on an extreme scale. Grozny's significance is due partly to the industrialised nature and size of the city, partly to the scope and intensity of operations involved, and partly to the limitations of conventional forces. But Grozny deserves attention primarily because it shows how difficult it is for even relatively unrestrained troops to conduct effective urban operations; Russian forces were militarily successful in 2000, yet the Russian occupation still failed to bring about the required result.

All three Chechen campaigns emphasised fundamental lessons that are relevant to all conventional militaries. These include the need for clear and concise goals that acknowledge political and social realities, the necessity for intelligence and local knowledge, and the major advantages held by defending fighters. That Russian forces were usually poorly trained and badly led reaffirmed rather than detracted from all the recognised lessons.[35] Thus Chechnya confirms that urban war places a premium on cohesion and morale. As Clausewitz noted, 'If an attack lacks material superiority, it must have moral superiority to make up for its inherent weakness. Where even moral superiority is lacking, there is no point in attacking at all, for one cannot expect to succeed.'[36] But the morale of the untrained Russian conscripts was very low; Chechnya represented misery and danger in an already hard existence. In contrast, Chechen fighters knew what they were fighting for. As a result, such wars become problematic for all conventional militaries, which are not designed for chasing loosely connected groups of fighters enjoying civilian support. Two additional lessons relevant to expeditionary forces may be identified. First, Russian troops fought against an enemy that was deceptively easy to despise; Chechen fighters were lightly armed, had no apparent discipline, and several factions operated primarily as criminal gangs. Cultural prejudice meant that Russian intelligence under-estimated its enemy. Second, identifying the nature of the war is important. Russian conscripts were told they would be disarming illegal groupings in 1994–95 whereas they were fighting an almost unrestricted war against a determined enemy.[37]

The battles in Grozny are unique yet many aspects of the operations are suggestive of known Western vulnerabilities, especially when fighting unconventional enemies. That the fundamental difference between the goals of the Russians and those of the Chechens created significant advantages for the latter is particularly important. Oliker notes that

> Where the Russians fought to control and hold territory, the rebels fought to make controlling and holding the territory as unpleasant as possible … To the Russians, territory captured was territory won. To the rebels, territory lost was a temporary retreat to regroup and attack once again. This asymmetry was exacerbated by the rebel's ability to blend into the local population. Not only could the Russians not tell combatants from non-combatants, they could not tell friendly subdued territory from hostile territory teeming with enemy forces … [The Chechens'] real success was in exploiting the differences between the war the Russians were fighting and their own.[38]

Chechen methods of warfare were low cost and easy to sustain; fighters moved in cars or on foot and relied on handheld weapons such as automatic rifles and RPGs. The Russians, meanwhile, were consistently weak in their intelligence preparation of the battlefield; preliminary reconnaissance was rare, signals intelligence limited and human intelligence undervalued. This is not true of Western forces but, even so, it remains easy to underestimate the difficulties associated with intelligence collection in cities. Sensors are downgraded, and density of population and hard cover means that it is extremely difficult to distinguish combatants and non-combatants. Human intelligence is often unreliable, as the USA learned in Mogadishu and relearned in Afghanistan. In other words, Grozny is most important for the negative lessons it reinforces: urban operations should be avoided wherever possible; when they cannot it is not always the most experienced or best equipped force that wins.

Other notable lessons include the following, which support the generalisations presented here:

- Military success must be complemented by coherent political strategies if conflict is to be politically or diplomatically

resolved. By February 2001 organised Chechen resistance was crushed but the absence of a political solution means that the political, economic and human costs of the war remains high.

- Grozny reaffirmed the importance of infantry as the foundation of combined arms teams. Airpower and long-range bombardment must be accompanied by a determined ground offensive, which depends on good quality NCOs and junior officers, training, morale and a readiness to take casualties.
- Clausewitzian notions such as decisive battle, fighting spirit and morale remain relevant.
- Tactics evolve by trial and error, rather than transformation. The Chechens fought a hit-and-run campaign that relied on sniping, ambush, assassination and mines. They fought in small cells that could be assembled into larger units when needed, which made it difficult for Russian units to inflict decisive blows. Even so, Russian soldiers adapted.
- Sustained high-intensity combat has serious effects on the physical and mental health of troops.[39] An alienated civilian population, an unpopular war or a mobile and knowing enemy exacerbate stress-related injuries.
- Short-term advantage accrues to the side with least regard for civilians.

This last lesson deserves special attention because its universality suggests that the Western notion of surgical or sophisticated operations in cities is probably a fantasy. Thus the Chechens deliberately employed 'military terrorism' in which acts of violence against civilians were conducted as part of a strategy or for a military purpose regardless of their costs. This often brought short-term advantage in terms of Russian casualties, a key building or propaganda. But the psychological operations on both sides were crude and often brutal, as both sides tried to gain the advantage. The Russians used leaflets, loudspeakers and radio interference while the Chechens relied on road blocks, protests, threats and international support. The Russian goal was to frighten the Chechen population so that they would put pressure on the rebels to abandon their prepared defences in urban areas and abandon towns, while the Chechen intent was to damage Russian morale and turn the Russian public against

the intervention. Both sides resorted to brutality to achieve the desired psychological impact, and both judged the ends justified the means.

Warfighting laboratory

Most Western analyses of the battles for Grozny concentrate on what Russia did badly, comparing Russian tactics and Western doctrine, but this ignores the fact that Russia's experience represents a unique source of information about the mechanics of urban war as fought by a large and technically superior force against a less structured but determined group of fighters with a high casualty tolerance, local knowledge and popular support.[40] Consequently, the lessons learned and the ideas and technologies used provide a warfighting laboratory for the West and a benchmark for developing future urban capabilities that is as relevant as the operations in Baghdad.

In an informative article, Tim Thomas assesses how well US forces would have performed under similar circumstances. He argues that the key US warfighting concepts (initiate combat on US terms, gain and keep the initiative, build operational momentum over time, and win as rapidly as possible) would not apply in an operation such as the third battle for Grozny. For the Chechens initiated combat on their own terms, prevented a quick victory, often denied the attacking Russian forces any initiative, and frequently regained their losses at the end of the day. Significantly, Russian forces used an indirect approach to surround the city (with up to 50,000 troops) and damaged it from a distance, beyond the range of the RPGs that had caused so many casualties in 1995. This took longer than a direct approach, resulted in significant international condemnation, and still did not end Chechen resistance.[41]

Grozny effectively expands the usual reference points of Western military analysis, not least because by 1999/2000 Russian leaders were fearful of urban war and determined to avoid repeating their earlier mistakes. It is noteworthy that this meant that they were, once again, unprepared and untrained for the realities of urban war.

Enduring Features

War will be fought differently in 2025 yet it is probable that many of the strategic and operational lessons evident in Grozny will be reaffirmed. That the tactics and technology involved will also probably remain recognisable to Russian troops suggests that urban war is not in the process of fundamental transition. Artillery, mortars, rockets and armour will continue to be used, thus suggesting that destruction (precision or otherwise) will remain characteristic of urban operations, together with the need to balance military success, tolerable casualties and political norms.

Artillery will continue to play a major role. It can provide direct-fire support within cities and can be used to isolate or prevent isolation outside them (though it is probably best used for interdicting supplies, evacuation or the movement of reinforcements). Its use causes mobility problems for the attacker at the same time as it provides concealment for the defence, but it is very useful for reducing strong points. It was as important in Baghdad in 2003 as in Grozny in 1995 or Beirut in 1982.[42] It has a major psychological impact on defenders and it can compensate for poor-quality infantry, untrained staffs and disjointed units. Russian forces often dealt with concealed or suspected snipers by collapsing the building from underneath them using self-propelled artillery, or by the 2S6 anti-aircraft weapon, which fires up to 5,000 rounds per minute. High rates of fire make automatic anti-aircraft guns an especially effective weapon in terms of shock and destructive effects (though ammunition supply is usually a problem).

Mortars will remain the most used indirect-fire weapon for some years to come; their high angle of fire allows rounds to reach street level without being masked by surrounding structures. And RPGs will no doubt retain their dominance. Each of the Chechen seven or eight-man teams in Grozny included one or two RPG gunners for use against personnel, armour and structures. The use of conventional, small-calibre artillery rockets to attack urban targets is, however, likely to increase; the use of conventional and improvised artillery rockets by, for example, Palestinian groups, is now part of a broader trend in which improvised mortars are being replaced by rockets with much

longer ranges. Rockets are reliable, technically unsophisticated and easy to use; they are not especially accurate, but accuracy matters less in non-conventional war or terrorism. As a result the use of rotary-wing aircraft is likely to remain limited. In many urban battles airpower has helped isolate the objective and obstruct the flow of a defender's supplies and reinforcements into the city, but the examples cited here confirm its relative ineffectiveness in terms of bombardment. Bombardment is usually intended to reduce the defender's will and physical ability to resist, but it rarely achieves either of these objectives.

Armour will probably continue to play a significant role in the coming years, especially when special assault teams are used; it can successfully breach concrete and steel structures for infantry when forming part of a combined-arms team. Indeed, it was a key technology in Iraq (and Jenin) because it provided protection and survivability against sniper and machine-gun fire. But armour and tanks require strong dismounted infantry support if they are not to suffer horrific losses; unaccompanied armour columns sent into Grozny in the 1994 assault suffered loss rates of 70 per cent. More recently, Palestinians successfully used command detonated mines (CDM) to destroy two of the IDF's £3 million, 60-ton Merkava main battle tanks.[43] Even Hezbollah guerrillas (generally better trained and equipped than Palestinian militants) had been unable to destroy a Merkava during 18 years of fighting against Israel.

Low-level shooting wars

The contemporary security environment suggests that, barring a North Korean offensive on Seoul or major discontinuities, low-level shooting wars are more likely than another Grozny or Baghdad, but there is nothing in recent operations to suggest that these will be easier than in the past or that urban war has been redefined. If anything, conventional wisdom is confirmed by, for example, the IDF's experience of dealing with Palestinian fighters during 2003. Israel has air superiority over the entire region, and most of the Palestinian Authority's strategic assets are dependent on Israel, yet Israel has still to destroy its adversaries. Palestinian fighters lack any form of central organisation or co-ordination – each of the group leaders involved in the

battle for Jenin planned and executed his own operation[44] – but accounts of IDF assaults, such as that on Yasser Arafat's compound in Ramallah in March 2002, sound remarkably familiar. A giant bulldozer broke through into the compound, followed by an armoured personnel carrier (APC) that disgorged 30 soldiers. They scrambled into position, inching along with their backs to the breached wall. One by one they stepped through the rubble; moving into the building they kicked down doors as they went, shooting inside rooms and hurling stun grenades. Noise levels were terrifying as tanks blasted buildings, throwing up clouds of white dust.[45]

In practice the most valuable lessons learned in Jenin-like scenarios concern tactical details. These include, for example, the need to time the insertion of Special Forces so that they are not overwhelmed by local militia, to improvise by taping flashlights to rifle hand-guards, and to employ translators familiar with the Palestinian slang used during cell-phone conversations. Significantly, identified lessons often contain references to past operations as well as suggestions as to new tactical developments. Thus the value of mouseholing, and the dangers of snipers, booby traps and sewers were rediscovered in Jenin. And the IDF officers involved judge armour a necessity, rather than an option, because vulnerable Cobra and Apache helicopters cannot suppress Palestinian fire. Armour is considered the only realistic alternative 'to wipe[ing] out the city … [because] Light infantry by itself simply doesn't cut it. Ranger-type forces in their Humvees [vehicles] will not do well … in an urban environment with heavy sniper and machinegun fire.'[46] The statement refers back to Mogadishu but looks forward in that the armour concerned is the IDF's D-9 bulldozer, rather than tanks, assault guns or howitzers; IDF forces could not advance in Jenin until they brought in D-9s to clear pathways and destroy buildings.

The operational and strategic lessons are familiar as well. Operationally it has often been difficult for Israeli commanders to get well defined policy objectives to which they could work steadily and logically. And, contrary to initial government expectations, the operation has been neither short nor economical. Strategically the most important lesson is, once again, that military action rarely solves the political problems underlying security challenges. That Israel, with its well trained troops

and highly efficient intelligence forces, has been unable to crush or control Palestinian fighters shows how difficult it is for conventional forces to manage low-level threats.

Continuity in war

With the exception of Russia, most major states no longer have direct experience of sustained and large-scale close combat in cities. Coalition forces engaged in fierce street fighting in Iraqi cities such as Umm Qasr during the three weeks of war in Iraq, and US Central Command officials claimed that up to 3,000 Iraqis were killed when an armed combat unit from the US 3rd Infantry swept through Baghdad's south-west suburbs. But the wide-scale urban war that many feared did not occur; anecdotal evidence suggests that Baghdad saw bloody street fighting that went unreported by the international media, yet Baghdad was taken with historically low levels of casualties and destruction. This may mean that the conventional precepts of urban war are no longer valid; that it is no longer necessary to fight urban war on traditional terms. Yet recent operations do not provide incontrovertible evidence that Western forces are more efficient at sustained urban war than they were in 1945 – they may be less effective, constrained as they now are by international law, cultural norms, the presence of the international media and the political imperatives shaping discretionary interventions. There is still no easy way to distinguish between combatants and non-combatants; the military significance of sewers or a warren of alleys is as potentially critical as ever; and operations continue to be exhausting. Peacekeeping, which is oriented towards achieving political stabilisation and the defeat rather than destruction of an adversary, may have been adapted to incorporate the 'War on Terrorism' but warfighting forces and doctrine are still designed for open terrain. Many current weapons systems remain optimised for rural operations and are unsuitable for use in cities; their associated weapons are too destructive and non-proportional for multinational operations. Many new weapons types may seem appropriate for cities but the physical characteristics and constraints of the urban environment could yet make their application problematical. And what works for legacy structures in 2003 may be unworkable in the digitalised structures expected by 2010.

Flaws in the West's ability to realistically assess the demands of operating in densely populated cities are evident. Experience shows that urban war is crude, but the West prefers to talk about mandated multinational forces and clean precision attack. Sustainability is an issue, but the standard scenarios used by most NATO forces have yet to engage with the scale and intensity of a Baghdad or Grozny, let alone simultaneous warfighting, enforcement and policing operations. The implications of this are evident from the readiness of British forces for urban war. The UK follows American thinking at the operational level but does not have comparable resources.[47] It procures against assumptions that do not address the real issues – there is currently no equipment on issue to British regular forces that has been specifically designed for use in urban fighting. As a result there is a marked discrepancy between what is known of the nature of urban war, the strength of existing political and legal constraints, and the requirement to buy against assumptions and scenarios that do not address the real issues. It may be that this will not matter. Street fighting may be avoidable. Being unable to conduct urban operations across the whole spectrum of urban operations does not necessarily indicate a potential crisis in immediate capabilities. British forces are neither ready nor configured to fight the transitional operations exemplified by the three-block war – but the three-block notion could prove misleading; it is probably not possible to make peace and war in the same location at the same time. In truth, addressing many of the resource issues underpinning or reflecting identifiable flaws in existing policies and capabilities for urban operations is often more a matter of routine management business. The threats are obvious but so are some opportunities. Examples of the latter might include the exploitation of existing infrastructure assets or the development of specialist staff officers and trainers specifically for urban operations (along the lines of those dealing with NBC). Relevant civilian skills could be systematically managed too, perhaps in terms of sponsored reserves with applicable skills. Attention could be given to pre-emption or the systematic use of proxy forces such as host-nation forces or mercenaries.

Soldiers learn and adapt under fire, but it takes time and the West is likely to remain averse to what is seen as unnecessary own-casualties and collateral destruction. Existing limitations

are intensified by resource and manpower problems, the lure of high technology, recent operational success and socio-political values and cultural norms at variance with the destructiveness of urban war. And there is little evidence that Western politicians and publics will find it easy to accommodate the proven characteristics of urban war – the tenacity many defending forces display, the short-term advantage that accrues to the side with least regard for civilians, the increasing irrelevance of restraint in the face of heavy losses, and the difficulty of suppressing (rather than fragmenting) chronic low-level violence. There is no evidence of a new kind of urban war or, indeed, a radical rethink of strategy.

Notes

1. The Western media usually focus on the plight of civilians, refugees and the displaced, rather than on heroism or the environment, which is secondary to the human drama. The implications of street fighting in Baghdad received widespread coverage from the UK press 'embedded' in coalition forces during Operation Iraqi Freedom, as did operations around Basra, but attention focused on physical destruction, mutilation and human grief. Contrast the lack of striking visual imagery associated with the inaccessible war in Afghanistan.
2. The battle for Baghdad lasted approximately five days. The battles for Grozny continued for months but most city fighting is of short duration. In 1989, for example, just before the US invasion of Panama, armoured vehicles (including main battle tanks) fought briefly in the middle of Bucharest as regular troops sided with armed revolutionaries to overthrow the Ceaucescu regime's Securitate troops.
3. This topic is considered in more detail in Chapter 7. 'New war' incorporates conflict, criminality and terrorism within an understanding of internal and regionalised conflicts. It relies on insights from political economy and anthropology, rather than military security. See M. Kaldor, *New and Old Wars: Organised Violence in a Global Era* (London: Polity Press, 1999); M. Duffield, *Global Governance and the New Wars: The Merging of Development and Security* (London: Zed Books, 2001).
4. See F. Donnison, *Civil Affairs and Military Government North–West Europe 1944–1946* (London: HMSO, 1961).
5. The problems associated with distinguishing non-combatants from fighters are a constant theme in urban operations. US forces at checkpoints outside Najaf in 2003 could not easily tell the difference,

and neither could Russian troops in Grozny, nor French paratroopers in Algiers. A typical anecdote from 1945 concerns US troops entering Cologne in March 1945. Groups of sullen civilians watched the fight from doorways, making it difficult for GIs to distinguish civilians from soldiers. See K. Margry, 'Battle for Cologne', *After the Battle*, 104 (1999), p. 15.

6. L. Mosely, *Report from Germany* (1945). Quoted in Donnison, *Civil Affairs*, p. 218.
7. L. Silber and A. Little, *The Death of Yugoslavia* (Penguin, 1995), pp. 194f. See also J. Udovičkii and J. Ridegway (eds), *Burn This House: The Making and Unmaking of Yugoslavia* (Durham, NC: Duke University, 1997), pp. 142–3.
8. The operation in Jenin was not strictly an urban operation – the area was rural and the camp small – but the fighting, which occurred within and between buildings, displayed many of the characteristics of urban operations. Jenin was merely one in a series of IDF operations, most of which were successful, but the presence of the international media ensured that the destruction and casualties associated with it became notorious. The area destroyed was somewhere between 2.5 and 6 acres. The results can be seen from photographs used during an Israeli government briefing at www.mfa.gov.il/mfa/go.asp?MFAH0II60. Fighting between Palestinians and the IDF meets definitions of armed conflict in that both sides have organised structures and control territory. It was not, therefore, illegal for Israel to kill members of Palestinian militia or the Palestinians to ambush IDF soldiers. What was questionable was whether the IDF spared or supported non-combatants or wounded fighters as the laws of war suggest it should. The non-governmental organisation (NGO) Human Rights Watch found evidence for 22 deaths, rather than the hundreds initially claimed. For the UN's verdict that 52 died see *Report of the Secretary-General prepared pursuant to General Assembly Resolution ES-10/10* (www.um.org/peace/jenin). For an IDF perspective see 'The nightmare returns', *The Times*, 28 October 2002. Compare A. Cordesman, *The Second Intifada and the Lessons of Jenin: Dealing with the Grim Realities of Urban Warfare* (Washington, DC: Center for Strategic and International Studies, 2002); D. Eshel, 'The Battle of Jenin', *Jane's Intelligence Review* (July 2002), pp. 20–3.
9. Quoted in 'The Middle East's bloodstained spiral', *The Economist*, 9 March 2002. The US military have paid great attention to the IDF's experience in West Bank towns. A Joint Chiefs of Staff delegation visited Israel in June 2002, and the USMC Warfighting Laboratory used the professional exchange to 'make changes to the Corps' urban war-fighting doctrine to reflect what worked for the Israelis'. Quoted in S. Graham, 'Lessons in Urbicide', *New Left Review*, 19 (January–February 2003), p. 75.

10. Compare Silber and Little, *The Death of Yugoslavia*, p. 101. Compare too the dynamics of the war in present-day Algeria where a cycle of mass slaughter and reprisals has resulted in total war; the notion of the enemy extends beyond the warring parties and terror is an instrument of war. See L. Martinez, trans. J. Derrick, *The Algerian Civil War 1990–1998* (London: Hurst, 2000).
11. S. Biddle, 'Balancing Long-range Precision Strike and Close Combat Capability', *Strategic Studies Institute Newsletter* (June 2001).
12. See, for example, 'Military's professionalism singled out for success in Iraq', *Financial Times*, 24 April 2003; D. Mulholland, 'Who will profit from war in Iraq?', *Jane's Defence Weekly*, 23 April 2003, pp. 20–1; 'Military transformation: The Janus-faced war', *The Economist*, 26 April 2003, p. 46.
13. K. Brown, 'The Urban Warfare Dilemma – US Casualties v. Collateral Damage', *Marine Corps Gazette*, 81, 1 (1997), pp. 38–40.
14. Ibid., p. 39.
15. British journalists embedded with coalition forces consistently linked such incidents to the US belief that a good war is one in which no Americans are injured and that America's adversaries are in some way subhuman. For representative broadsheet accounts see, 'I don't care if they nuke that bloody city now', *Sunday Times*, 30 March 2003; 'Overkill', *Sunday Times*, 26 May 2003. Compare the UK MoD's later investigation of several British soldiers after incriminating photographs of the abuse of Iraqi prisoners were found.
16. It is arguable that restraint actually increased Israeli casualties. More power was used during the battle of Nablus, which lasted only two days and resulted in fewer Israeli (though more Palestinian) casualties. See G. Avidor, 'The Battle of Jenin, April 2002' (www.urbanoperations.com/jenin.htm). Note that the IDF 'remains committed to the concept of offensive manoeuvre'. 'Country Briefing: Israel', *Jane's Defence Weekly*, 1 May 2002, pp. 24–34.
17. See E. Larson, *Casualties and Consensus* (Santa Monica, CA: RAND, 1996). Compare C. McInnes, *Spectator-sport War: The West and Contemporary Conflict* (Boulder, CO: Lynne Rienner, 2002). Significantly, the anger and fear of US troops at Nasiriya in March 2003 were reportedly 'fuelled by rumours that the bodies of American soldiers had been dragged through Nasirya's streets'. See 'I don't care', *Sunday Times*, 30 March 2003.
18. Cordesman, *The Second Intifada*, p. 2.
19. 'US learns "fundamental" lessons from regime's collapse', *Financial Times*, 16 November 2001. British forces traditionally called such operations emergencies rather than wars, thereby treating their adversaries as criminals rather than belligerents.
20. 'New expectations', *Financial Times*, 12 November 2001.

21. See 'Technology brings power with few constraints', *Financial Times*, 18 February 2002.
22. 'Inside al-Qaeda: Bin Laden's martyrs for the cause', *Financial Times*, 28 November 2001.
23. See 'US faces dilemma over Kunduz fighters', *Financial Times*, 23 November 2001. Adam Roberts, editor of *Documents on the Laws of War*, has compared the US position to that of Israel after the massacre of Palestinians by its Lebanese Christian allies in the Sabra and Chatila refugee camps in 1982. Under international conventions, combatant forces are defined not only as those who carry arms openly but also as those who themselves abide by the laws of war. Most acts of terrorism count as violations.
24. American fears were evident in a slip of the tongue by Tommy Franks, commander of US forces in Afghanistan. In March 2002 he told reporters that his thoughts went to the families and friends of the US servicemen 'who have lost their lives in our ongoing operations in Vietnam'. Quoted in 'Friends and foes', *Financial Times* 6 March 2002.
25. It was, in fact, the war the US Department of Defense (DoD) had been preparing for. See K. Burger and A. Koch, 'Afghanistan: the key lessons', *Jane's Defence Weekly*, 37,1 (2002), pp. 20–7.
26. Contrast M. Ignatieff, *Virtual War: Kosovo and Beyond* (London: Chatto & Windus, 2000).
27. The literature on the wars in Chechnya is extensive. For the 1994–96 war see, for example, S. Edwards, *Mars Unmasked: The Changing Face of Urban Operations* (Santa Monica, CA: RAND, 2000); T. Thomas, 'The Caucasus Conflict and Russian Security: The Russian Armed Forces Confront Chechnya III. The Battle for Grozny, 1–16 January 1995', *Slavic Military Studies*, 10, 1 (1997), pp. 50–108; A. Lieven, 'The World Turned Upside Down: Military Lessons of the Chechen War', *Armed Forces Journal International* (August 1998), pp. 40–3; A. Lieven, 'Lessons of the War in Chechnya, 1994–96', in M. Desch (ed.), *Soldiers in Cities: Military Operations on Urban Terrain* (Carlisle, PA: Strategic Studies Institute, US Army War College, 2001), pp. 57–74. For eyewitness reportage see C. Gall and T. de Waal, *Chechnya: A Small Victorious War* (London: Pan, 1997). Other notable articles include T. Thomas, 'The Battle for Grozny: Deadly Classroom for Urban Combat', *Parameters* (Summer 1999), p. 87–101; T. Thomas and L. Grau, 'Russian Lessons Learned From the Battles for Grozny', *Marine Corps Gazette*, 84 (2000), pp. 45–8. For analyses covering all three wars see O. Oliker, *Russia's Chechen Wars 1994–2000: Lessons from Urban Combat* (Santa Monica, CA: RAND, 2001; the Urban Operations Newsletter (www.urbanoperations.com); and publications by the US Army Foreign Military Studies Office (http://call.army.mil/call/fmso).
28. See J. Pilloni, 'Burning Corpses in the Streets: Russia's Doctrinal Flaws in the 1995 Fight for Grozny', *Journal of Slavic Military*

Studies, 13, 2 (2000), pp. 39–66. The US defence attaché to Moscow at the time was reliably informed that the general staff officers involved in the 1995 operation simply applied the General Staff College plan for the 1945 battle for Berlin to Grozny. Ibid., p. 64.

29. M. Bouret, 'Witness to Madness', (www.time.com/time/europe/photoessays/grozny.htm).
30. See P. Simunovic, 'The Russian Military in Chechnya: A Case Study of Morale in War', *Journal of Slavic Military Studies*, 11,1 (1998), pp. 63–95. Simunovic deals with the 1994–96 war in which tens of thousands combatants and non-combatants were killed, and hundreds of thousands made refugees. Not surprisingly, human rights groups such as Physicians for Human Rights repeatedly noted that the conflict was accompanied by civilian executions, torture and extrajudicial detention. Compare A. Politkovskaya, *A Dirty War* (London: Harvill Press, 2001). For the effects of bombardment on Chechen fighters and ethnic Russian residents during the 1995 battle see Gall and de Waal, *Chechnya*, pp. 219–25.
31. See Gall and de Waal, *Chechnya*, p. 65; 'Russia says war is within budget', *Financial Times,* 25 January 2000; M. Galeotti, 'Costs of the Chechen War', *Jane's Intelligence Review* (April 2000), pp. 8–9. Many of the costs will be sustained for some time because pacification will take years and require a garrison of at least 25,000 troops.
32. Not only had the price of oil sharply increased in the summer but also some analysts hold that much of the money probably came from the West. The last big loan to Russia from international financial institutions was $100 million (from the World Bank) intended to modernise the coal sector. Even if that money was not diverted, the International Monetary Fund had in July made a payment of $640 million, the money officially being used to pay interest on earlier loans. It should be noted that doing nothing also entailed costs – Chechens were behind one of Russia's biggest-ever banking frauds. See S. Mulvey, 'How Russia pays for the war', 12 January 2000 (news.bbc.co.uk).
33. See M. Orr, 'Better or Just Not So Bad? An Evaluation of Russian Combat Effectiveness in the Second Chechen War', in A. Aldis (ed.), *The Second Chechen War*, Occasional, 40 (Strategic and Combat Studies Institute, 2000), pp. 83–109. Russian forces did not have non-lethal weapons and the use of chemical weapons was vetoed. Oliker estimates that while fighting in and around Grozny resulted in oil spills and fires at the chemical factory, there is no proof of the use of chemicals as weapons. See Oliker, *Russia's Chechen Wars 1994–2000*, p. 69.
34. See L. Grau, 'Technology and the Second Chechen Campaign: Not All New and Not that Much', in Aldis, *The Second Chechen War*, pp. 101–10.
35. In the warehouse district of Grozny in March 1995, a Russian special-purpose detachment fought a paratrooper unit for two days

for control of a large carpet warehouse. S. Knezys and R. Sedlickas, *The War in Chechnya* (College Station, TX: Texas A&M University Press, 1999) p. 187.

36. Material superiority is not, however, sufficient; neither is it synonymous with advanced technology. Morale relies on the skill of the commander, and the experience and courage of his troops. See C. von Clausewitz, *On War* (Princeton, NJ: Princeton University Press, 1976), p. 545.
37. G. Herd, 'The "Counter-Terrorist Operation" in Chechnya: "Information Warfare" Aspects', *Journal of Slavic Military Studies*, 13, 4 (2000), pp. 57–83.
38. Oliker, *Russia's Chechen Wars*, p. 73.
39. For an evaluation of stress-related injuries see T. Thomas, 'Combat Stress in Chechnya: "The Equal Opportunity Disorder"' (call.army.mil/call/fmso/fmsopubs/issues/stress.htm). Russian experience in Grozny 1994/6 also prompts the question as to whether politically mandated ceasefires during an occupation are militarily flawed. Those in the second half of 1995 and the summer of 1996 demoralised Russian troops, whose alertness declined. The constant sniping meant that they were always on edge but could not respond with massive force. See A. Lieven, 'Lessons of the War in Chechnya', in Desch ed., *Soldiers in Cities: Military Operations on Urban Terrain*, p. 61.
40. The point is made forcefully by T. Thomas, 'The Battle for Grozny: Deadly Classroom for Urban Combat', revised version, Foreign Military Studies Office, Fort Leavenworth, KS, May 2001. Originally published in *Parameters*, 29, 2 (1999), pp. 87–102.
41. See T. Thomas, 'Grozny 2000: Urban Combat Lessons Learned', *Military Review*, 80, 4 (2000), pp. 50–8.
42. In Beirut the IDF used 155mm SP howitzers to bring down eight-storey buildings with two or three carefully aimed shells. See J. Leaf, 'MOUT and the 1982 Lebanon Campaign: The Israeli Approach', *Armor* (July–August 2000), pp. 8–11.
43. A. Geibel, 'Recent Merkava Attacks Highlight Growing Command Detonated Mine Threat', *Armor*, 111, 3 (2002), pp. 46–7.
44. G. Avidor, 'The Battle of Jenin: April 2002' (ed. Russell Glenn, 2002) (www.urbanoperations.com/jenin.htm).
45. 'Tanks open fire, then troops pour in', *Daily Telegraph*, 30 March 2002.
46. 'OPERATION JENIN: Israeli Officers View' (www.urbanoperations.com).
47. An MoD dossier written for General Sir Michael Walker, then head of the British Army, in 2002 noted that Army medical services had an 81 per cent shortfall in surgeons, 80 per cent shortage of anaesthetists and only 5 per cent of the necessary burns-unit nurses. 'No. 10 tells general how to spin', *Sunday Times*, 7 April 2002.

PART III: Reconstruction

7 The Evolution of War

Although the characteristics and constraints of urban operations are remarkably consistent, contingencies, emergent trends and specific issues may yet rebalance Western operations. At the time of writing a US offensive in the 'War on Terrorism' appears the most likely contingency, while potentially significant trends include the Pentagon's intention to 'skip a generation' in military technology, the multinational composition of most recent interventions, expanded definitions of security and the belief that destruction should be followed by reconstruction or rehabilitation rather than spoilation.[1] This suggests that, while the mechanics of operations are relatively fixed and tactical change is evolutionary, the factors shaping strategic guidance are flexible and transitory; balancing the two is therefore critical. This is especially so in densely populated cities where traditional Western security imperatives (national interest, coercion, punishment) must now acknowledge humanitarian concerns, the public expectation of minimal own-casualties and the processes of internationalisation and globalisation.[2] Investigating the resultant tensions provides a means to identify the fundamental strategic and operational dilemmas of contemporary operations. It also places the phenomenon of urban operations within the broader context of security.

The need to balance the known nature of urban operations with emergent issues introduces the third section of this book, which falls into four parts. The implications of the expanded

Western security paradigm are evaluated in this chapter, while the drive to balance military effectiveness with minimal casualties and non-collateral damage is discussed in Chapter 8. The contradictory themes of inherently destructive operations and liberal norms are brought together in Chapter 9, which identifies the central tension of urban operations: the incompatibility of contemporary Western moral and technological imperatives. By these means an understanding of urban operations as a potentially critical form of security operation is constructed on the basis of experience rather than ideals. Further, this approach allows the identification of a coherent set of variables, thus enabling Chapter 10 to propose an urban operations hypothesis.

This chapter addresses whether recent changes in the West's application of military force could challenge the understanding of urban operations presented so far. It considers whether the boundaries between conventional urban operations and operations which promote powerful liberal notions such as human security and civil society are dissolving. Prompted by recent operations in which forces were expected to fight a 'humanitarian' war it asks several questions: What is the military utility of the liberal notions associated with expanded definitions of security? Can they make the conduct of Western operations more efficient? Could such trends shape strategic guidance? What are their implications for future urban operations? The concept of civil society is used as the means for investigating these issues because it may be seen as an entrance into understanding how cities work, to the social structures underpinning them, or as an aspect of cultural awareness. Cities are where most forms of politically relevant associational life take place and civil society could represent an attractive means of engaging with a populace, especially when developmental objectives shape an operation.

Defining Security

In recent years the West's security paradigm has expanded from purely military concerns to embrace those associated with development and humanitarianism.[3] Most contemporary conflict occurs within the developing world so it is not surprising that conflict is understood as a developmental failure and underdevelopment

as a source of instability, or that security frequently incorporates the promotion of liberal notions such as accountability and civil society. The understanding is reinforced by the fact that many conflicts occur in areas where qualified state systems (that do not depend on conventional territorial, bureaucratic or consent-based authority) have developed.[4] That threats are emerging from states widely regarded as dysfunctional, that their reconstruction is thought to require co-operation between all sectors of the society concerned, and that Western militaries can no longer walk away once combat stops is made clear by recent events in Afghanistan and Iraq. Such beliefs deserve attention here because not only do they have the capacity to shape strategic guidance but also they have already moulded operations. The conviction that the machinery of the Iraqi state should be rebuilt and humanitarian assistance provided to 'the people' ensured that US forces did not leave Iraq in April 2003: 200,000 remained in the country in May 2003, 16,000 of them in Baghdad. But the coalition programme in Iraq is essentially traditional and it is the incorporation of air strikes and airdrops within a single operation in Afghanistan in October 2001, followed by the bargaining surrounding the creation of Hamid Karzal's interim government, that is most symptomatic of this trend.

There is no precise precedent for the overnight drops of food parcels that accompanied the October bombing raids but the belief that air strikes and humanitarian relief can be complementary was endorsed at the highest political levels. Donald Rumsfeld affirmed it when he briefed Congress on how aid drops (which included propaganda leaflets) could be used to undermine support for the Taliban and complement the air strikes designed to destroy terrorist bases. It was reaffirmed by British Prime Minister Blair's call for the creation of a humanitarian coalition to match the military coalition, which was then conflated into a coalition to destroy al-Qaeda, remove the Taliban and reconstruct Afghanistan. And it suggests that evaluating the notion of civil society in the context of military operations in fragile states such as Afghanistan is a means of questioning the tie between conflict and development that could shape future urban operations. Admittedly Afghanistan had few urban operations (and seemingly none involving conventional coalition land forces) but its value here is that it makes explicit the West's approach to the security problems likely to

prompt future operations. In addition, its inclusion within the 'War on Terrorism' balances both conventional military concerns and those of development. For Afghanistan is the world's top producer of heroin and, seemingly, an al-Qaeda incubator. It had no formal economy or governing structures in late 2001; years of civil war and fighting had destroyed the infrastructures of its cities, resulting in severe shortages of water, food and shelter. Focusing on the notion of civil society in such a state accordingly provides an entrance into the argument that conflict and developmental issues are not only linked but that developmental goals could or should influence military operations. For civil society represents prevailing liberal views and has considerable potential to influence the political objectives shaping military operations. It symbolises the West's search for non-violent strategies to deal with insecurity, and encapsulates the principles of partnership underpinning policy objectives such as stabilisation and the increase of social capital. It or a similar notion may yet shape the strategic context of policy guidance and be used to justify future interventions.

The application of civil society and, by extension, developmental concerns to urban operations are politically appealing but operationally and strategically flawed. Combining military concerns with development objectives and basic human rights to form a new concept of security is not sufficient to provide a firm footing for policy, let alone operations. For, although the promotion of civil society is indicative of shifts in the international justification for operations, nothing detracts from the fundamentally destructive nature of military force in cities. This suggests that while Western forces need to be aware of the changing security agenda it is not necessary for them to operationalise the expanded perspective. It also confirms that governments do not, indeed cannot, make war and peace at the same time,[5] thus raising fundamental questions about the new security paradigm.

Conflict and Development

Much of the analysis that has taken place since 11 September is based on the belief that conflict and terrorism are causally linked to underdevelopment and economic deprivation. Conflict

has become a developmental issue and development has been reinvented as conflict prevention; military operations have become a preliminary to reconstruction. The trend is understandable. Circumstantial evidence suggests poverty and frustration lie behind the loathing directed by many in the South against the USA and the North more generally. That the coalition taking military action in Afghanistan needed to invest in the country's future if it was not to replicate the conditions that allowed the Taliban to gain power in the first instance seems reasonable. Simply providing dollars will not eradicate conflict or extremism so the coalition needed to promote appropriate mechanisms for its administration too. Only then can Afghanistan experience stability and security. But establishing a firm causal connection between the various factors is notoriously difficult and, even if the connection is established, its expression as a strategic objective is not straightforward. Conflict may have become an integral part of developmental discourse but it is much less clear that developmental concerns should mould military strategies and capabilities.

The situation in Afghanistan is unique, but a decade of peace-keeping and development aid has dissolved many security boundaries. Most of the time the West ignores the paradox of punishment and reconstruction this permits. The laws of war are now referred to as international humanitarian law, and war has become 'humanitarian war' – NATO regularly used the phrase to explain its war against the Serbs on behalf of the Muslims in Kosovo during 1999, and its bombing campaign was described as defending 'humanitarian principles'. The British government provided a comparable justification when its forces rushed to the rescue of Albanian refugees trapped on the Macedonian border, working with aid agencies even as allied forces bombed Belgrade. Aid agencies have in turn become associated with belligerents. Arguably what this really means is that humanitarian war does not refer to wars in which militaries intervene for humanitarian reasons so much as wars in which they form an alliance with the humanitarian community to contain the effects of Western military action.[6] But much depends on national interests. The post-Cold War world allowed states such as the UK the luxury of discretionary intervention but more traditional (and, perhaps, rational) calculations prompt the involvement of other states.

Thus Canada sought political influence from peacekeeping while Pakistan looked to gain access to desirable resources. Similarly, involvement in the 'war' against terrorism remains motivated by traditional factors. At the same time as the Pentagon insisted that all al-Qaeda terrorists should be imprisoned or killed, Japan stepped up its efforts to play a leading role in the rebuilding of Afghanistan and thereby increase its international presence. Russia and China meanwhile identified the US response with their own campaigns against terrorism in Chechnya and Tibet. There is no such thing as an unbiased use of force.

If the coalition operation in Afghanistan that coupled missile attacks with airdrops of food is seen against this backdrop then its mixed message is understandable. Unfortunately it is also typical of what is seen by much of the world as Western hypocrisy – not least because the belief that it is possible to make war and peace at the same time is a luxury only rich states can afford. Whether the charge is accurate or not matters less than the fact that the purpose of operations such as those in Afghanistan is seemingly destruction and reconstruction, punishment and rehabilitation. Hence the objection of an interviewer at the Arab TV station Al-Jazeera who, in an interview with Tony Blair, observed that by coupling missile attacks with air drops of food Blair was 'trying to kill the father and feed the son'.[7] In the event, Blair dismissed the seeming contradiction, emphasising instead that the war was against terrorism, not the Afghan people. He insisted that Western targeting practices ensure that civilian casualties are kept to a minimum and that once terrorism's sponsors are destroyed Afghanistan must be rebuilt and the country ruled by a government chosen by its people. In other words, Afghanistan must be developed. It is this scenario, of Blair's belief in the compatability of arms and aid, of Western security and Afghanistan's development (and, therefore, its security), which will set the context for operations in the medium term.

Civil society

Personal enmities and interests divide the major power groups in states such as Afghanistan, and it is difficult for Western governments to identify how the consensus and stability needed for both security and development might be achieved. The dual

objectives of the international community in 2001 were usually described as the creation of a new 'nation state' reflecting both international norms and those of the Afghan people. But two decades of war mean that identifying who the Afghan people are is difficult. One answer to the problem appears to lie in local communities and associational groups – that is, civil society.

The term 'civil society' is notoriously elusive and much depends on the context in which it is used. Originally a philosophical notion, the term is multifaceted and contradictory, and most understandings of it are partial and abstracted from its historical meaning. Some authors refer to it as if it is a coherent whole while others relate it to norms concerning the nature of the state, to popular movements against authoritarian regimes, to autonomous societal groups interacting with the state, and to civilian society.[8] Each understanding is selective. Locating acceptable forms of civil society in a war-torn society such as Afghanistan requires subtle judgement, not least because the country's tribal traditions and power rivalries mean that its political system may never adhere closely to Western ideas of the nation state. The followers of a Pushtun warlord responsible for a massacre cannot be considered as civil society in the conventionally accepted sense of the words. Similar considerations apply to Afghanistan's clientelistic networks and religious sects as far as the US-led coalition is concerned. Furthermore, its application in the developing world has a mixed record. In the early 1990s, for instance, the UN promoted 'community-based organisations' as the means of building democracy in Somalia, but all that this achieved was the enrichment of certain local groups. Despite this the attraction of civil society to policy makers lies in the liberal consensus that the social groups thought to represent it constitute the fundamental building blocks of political action and interchange. This understanding, grounded in the transitional processes experienced by eastern Europe in the early 1990s, builds on the notion of social actors devising various strategies to survive crises associated with repression, economic underdevelopment and political illegitimacy. It is also comparatively cheap.[9]

Civil society may yet prove influential because it appears to represent a way out of the impasse of conflict and repression in dysfunctional states. It is a powerful metaphor and a significant indicator of trends that could shape strategic guidance. The

chances of it doing so will be increased if it is also thought to facilitate the exit of military forces and the transition from humanitarian relief to long-term development. Its attractions will grow if it is thought to offer the West political influence. Over the last decade the human-security perspective, to take a comparable notion, has proved politically attractive to middle-power states, such as Canada, for which its promotion represents a means of gaining influence. A former Canadian foreign minister, Lloyd Axworthy, made the connection explicit when he said that the human-security agenda is 'crucial not only for the security of individuals, but also to maintain Canada's role as a leading voice on the world stage. These are the considerations that have been motivating our efforts.'[10] Similar motives prompt Blair's consistent argument that British forces can become a 'force for good for our nation and the wider world'.[11] The notion of human security may be too broad and vague to be analytically meaningful – but it cannot be ignored because it has already shaped Western policy and tactics. For it was Canada, which made a human security agenda the hallmark of its foreign policy, which provided the initial inspiration behind the coalition that led to the Ottawa Convention banning land mines.

The main attraction of civil society here is that it appears to represent a pragmatic and politically acceptable way out of a predicament. Afghanistan is a source of terrorism, refugees, hard drugs, poverty and violence. Preventing the situation that allowed the Taliban to dominate the country in the first instance is critical, but transforming its social system is beyond the ability (and legitimacy) of any individual government. Promoting civil society – or insisting on the inclusion of a broad range of interests in any interim government – is a relatively non-controversial means of facilitating stability and the departure of military forces, and encouraging the liberal values of co-operation, consensus, partnership and stability.[12]

Expanding Operations

The appropriate balance between security and development-related objectives is controversial. Western forces fulfilled a broad range of non-warfighting (peacekeeping) duties throughout the

late 1990s, but identifying the optimum ratio between warfighting and non-warfighting objectives and capabilities was always contentious. In the summer of 2000, for example, Sir Charles Guthrie, then chief of the UK's Defence Staff (CDS), told the *Daily Telegraph* that 'too many humanitarian missions could turn the professional British Army into a "touchy-feely" organization, more concerned with widows and orphans than fighting'.[13] The quote may misrepresent the thrust of the interview, but the cautionary nature of Guthrie's comments are widely shared; according to *The Times*, 'other senior officers' agree that too great an emphasis on peacekeeping will result in British forces becoming a 'gendarmerie' with a diminished reputation for fighting. The point at which risk and benefit intersect is clearly a sensitive issue. The debate concerning the impact of peacekeeping on the UK's warfighting capabilities is now quiet, but most professional militaries remain committed to warfighting rather than non-warfighting. Even so, the military role could expand if, for instance, the politicians providing strategic guidance adopt a strong nation-building, that is, development-oriented, approach in support of regime change and reconstruction. It could also expand because (as coalition forces in the southern Iraqi cities of Umm Qasr and Basra found in 2003) Western forces are expected to offer assistance to non-combatants during operations. Even the Russian Army discovered in the Grozny campaign of 1994–96 that, as the sole representative of the government in Grozny, it was expected to provide food, shelter, water, sewage, electricity and medical treatment to the civilians. In fact Russian forces could not have fought and restored the utilities even if they had wanted to and the Russian Ministry of Emergency Situations, EmerCom, eventually handled the task.[14] Significantly, one reason for tension in Iraq in the weeks after the war of 2003 was the failure of the US authorities to provide basic services. Any such expansion would balance the UK's warfighting capabilities and preferences, let alone those of the USA with its overt distaste for nation building, but it would also present many problems. It deserves attention here because densely populated cities will accentuate the problem at a number of levels.

Expanding military operations is likely to be divisive. That warfighting capabilities took precedence in Iraq in 2003 was understandable, so the potential problems are better illustrated

by the situation in Afghanistan where (for political reasons) aid formed part of the overall military package. Many of the aid agencies effectively supporting coalition objectives were suspicious that this compromised their credibility and codes of conduct. One described the combination of food drops and air raids as 'cheap and disgusting', while the director-general of Save the Children Fund said that aid organisations must find a way of distancing themselves from the military operation if they were to retain credibility.[15] The agencies' unease may merely mean that, while relief and development agencies have incorporated conflict within their legitimate concerns, they have not realised the extent to which their concerns have been incorporated in the agenda of other organisations. Whatever the case, Clare Short, then British development minister, dismissed such concerns as disingenuous: 'Since the cold war, aid people have tended to say "we don't touch armies …" But this is the world we're in. All the time we are having to interface with the military.'[16]

More generally, development-related notions are unrealistic as guides to security policy for two reasons. First, their objectives are Western constructs. Second, although their goals can be used to shape policy, their military appropriateness, let alone their translation into successful tactics, is quite another matter. The provision of potable water is relatively clear cut, but neither civil society nor human security – the two most representative liberal notions – addresses the understanding of stability and security in the parts of the world to which they are usually applied. Their general application as a policy is plausible only when the stakes are not high. Canada may be able to afford them but their adoption would be thought weak or suicidal in Pakistan, Israel or Chechnya. More generally, the merging of developmental concerns and military security ignores the destructive violence inherent in most military operations; peacekeeping and humanitarian relief are not what most militaries do, especially in the developing world.[17] Military forces cannot provide the humanitarian relief, health support and infrastructure building that developmental goals demand any more than they could act as modernising agents in the post-colonial states of Africa. Such flaws suggest that combining military security and basic human rights to form a new concept of security is not sufficient to provide a firm footing for policy let alone operations.

Civil society's limitations

The relevance of liberal notions such as civil society to security objectives is especially questionable in relation to cities. Even if we can identify the constituent parts of civil society there is no guarantee that doing so can ensure stabilisation or reconstruction, let alone development. It is rare for semi-formal associations, such as mosques, to develop into alternative governing coalitions with sustainable social bases and coherent policy platforms. Few associational organisations have been able to consolidate into political organisations; success tends to dissipate energy and leaders soon adapt to prevailing governmental norms. But even if this was not the case, Western optimism concerning its value may be misguided. As is evident from Africa's experience, there is no simple correlation between a strong associational life and democratic government. Associational groups, such as those linked to Islam, may make demands on the state, occupying authorities or transitional administrations that they are incapable of processing, let alone providing. Governing elites may manipulate local traditions of associational life to legitimise and maintain their own position (though such a socialising process can also be regarded as state building). Civil society may theoretically be capable of encouraging transparent and accountable forms of security, and the extension of effective citizenship, but there is little evidence that this has taken place so far. This is unsurprising, for to achieve any form of development or liberalisation requires specialised skills and receptive cultural norms, which are themselves scarce.

Our understanding of civil society is also discriminating and vulnerable to misunderstanding, as the following two examples show. In many parts of the world illiberal groups such as the Muslim Brotherhood, Hamas and Hezbollah are civil society; they provide social services, medical assistance and temporary housing. The Palestinian militants' infrastructure in Lebanon, for example, was located within Palestinian welfare organisations, financial institutions and mosques, most of which were located within the major cities. In the absence of an interim administration in Baghdad in 2003, Shi'a clerics administer hospitals and organise traffic control.[18] In contrast, it is the state that sets the boundaries and space for civil society in countries such as Singapore; the networks representing Singaporean civil society

are subsumed under the heading of state initiatives for community development, welfare provision and neighbourhood security. Of course Singapore is very unlike Afghanistan or Iraq but the comparison emphasises that civil society does not necessarily move smoothly from being an analytical concept to becoming a political project consistent with liberal goals. Despite this cities are undoubtedly where most forms of politically relevant associational life take place. For this reason civil society could seem an attractive means of engaging with a populace; it could be seen as an entrance into understanding how cities work, to the social structures underpinning them, or as an aspect of cultural awareness. This suggests that the key question to ask of civil society – and, by extension, comparable liberal notions – in the context of urban operations is whether it has military utility. The answer must be that it does not.

There are many reasons for this, of which the following are the most basic. The balance between destruction and sustainment is a political decision, but notions such as civil society are irrelevant during war. The international promotion of liberal norms (and humanitarian law) favours Western militaries with their precision weapons, but concerns regarding civilian casualties and collateral destruction invariably lessen if casualties increase, forces become frustrated in trying to distinguish fighters from non-combatants, and war drags on. Immediate tactical advantage accrues to the side with least concern for civilians during warfighting: Iraqi suicide bombers wearing civilian clothes killed US troops at checkpoints outside Najaf, and when in 1994 Russian troops minimised casualties Chechen fighters simply took advantage of them. And, as Chapter 6 notes, civilians are used to shape the battlespace, either by the West or by its adversaries. The presence of non-combatants has affected the course of operations in most urban operations. This is because civilians either show a great determination to fight or because they do not have the resources or determination to fight. Civilians acted as force multipliers for the Red Army in Stalingrad, as human shields in Mogadishu, and they repeatedly tried to manipulate peacekeeping forces into supporting one side at the expense of the other in Sarajevo and Pristina.[19] Cities are rarely empty and Western governments cannot afford too many media pictures of mutilated children.

Civil society is an irrelevance in such circumstances because, assuming it exists, it is not targetable by invading (or liberating) forces. It is probable that Western forces will be required to manage non-combatants at the same time as fighting, but the stakes will be too high to allow reconstruction or developmental concerns to play a major shaping role during warfighting. Civil society cannot play the same role as cultural intelligence or psychological operations. Socio-political trends in liberal democracies may promote the value of humanitarian intervention and reconstruction, while the current conflation of conflict, security and development may mean civil society shapes strategic guidance, but neither provides practical understanding as to how cities (or the social structures underpinning them) work. And they cannot enhance understanding of how to achieve successful operations; the promotion of notions such as civil society is at odds with the fact that the success of a military force remains dependent on its ability to conduct simultaneous operations aggressively and persistently.

Civil society during conflict

Civil society is not targetable. City life is normally the result of a complex web of social forces, institutional settings and interpersonal relationships, but such relationships are usually suspended during military operations and are undermined by lengthy operations or occupations. Scale is condensed down to the clan, family, street or building as morale breaks down, destruction enhances survival issues, and informers undermine associational ties. Such processes were as evident in Mogadishu and Grozny as they were in Singapore after the surrender by British forces to the Japanese in 1942. Each of these examples clarifies the limits of civil society's applicability.

Mogadishu

Mogadishu makes plain the ethnocentric basis of the West's understanding of civil society. After the Somali state fragmented down to the clan and street level in 1991, many donors promoted 'community-based organisations' as a means of promoting democracy, but in practice very little changed. Somalia remained a patchwork of rival fiefdoms in which clan militia and elders

competed with cross-cutting religious and business interests. As a society Somalia was characterised by a mosaic of competing factions, backed by regional interests, that may or may not have represented civil society but which was inaccessible to Western influences. Since international forces left the country in the mid-1990s, Islamic organisations have, however, filled many gaps, creating schools and courts.

Grozny

Civil society in an industrialised area such as Grozny is arguably a more relevant example for the West, but Grozny also presents a classic example of the irrelevance of civil society during open conflict. Whatever forms of associational life existed before the operations of the 1990s were destroyed when Grozny was reduced to rubble; civil society had little meaning in a city whose inhabitants were too old or frail to leave. Several years later Grozny is still caught in attritional war. There has been some modest progress towards political negotiations but attempts to restore normal life have had limited success. Moscow's plans for stabilisation in 2003 included a constitutional referendum and new presidential elections, but human rights organisations questioned the legitimacy of the March referendum in conditions of war, while the elections of a pro-Moscow former warlord as president in October was dismissed by the USA as a sham. Associational life plays little part in the life of the ordinary Chechens trapped between internal conflict, anger at Russian troops, frustration at the devastation, and threats from rebels if they collaborate with Moscow's attempts at restoration. War and chronic violence have destroyed morale and associational life in Grozny.

Singapore

This conclusion is further supported by evidence from Singapore in 1942. Before the British surrender of the city state there had been many associational groups, based around ethnicity and social status, but they were lost with the Japanese occupation. With the collapse of the British administration, public services came to a stop, and scavenging and the restoration of water supplies became a priority. The associational groups forming part of British society were destroyed by imprisonment while

beatings and summary executions subdued the indigenous population. Once the initial shock of the British surrender wore off, the life of the local population became dreary. There were many dramatic events such as mass killings, torture and forced labour but, as time passed, people lost their sense of purpose.[20] Associational life meant little because there was a conviction that no one had a future. Singapore experienced what was described after the war as a 'moral deterioration' in which respect for authority declined, traditional values were lost and selfishness dominated. The mutual trust required for civil society to function was destroyed when neighbours reported indiscreet remarks to the Japanese military police or invented damaging information so as to receive cigarettes.

The destruction of associational life by the Japanese was deliberate. Community life was systematically undermined by the use of informers and summary execution so as to deal with possible resistance. Neighbourhood associations existed solely as control measures; Japanese policies towards the Malays, Chinese and Indian groups on the island varied according to status and ethnicity. Acute food shortages meant that immediate family ties were more important than any form of civil society.

Civil society and low-level operations

Civil society plays little part during warfighting yet the developmental concerns it encapsulates could still be influential lower down the operational spectrum. After all, urbanisation implies social relationships, and cultural intelligence and ethnographic information from specific cities has potential military utility (though the means by which it can be shared, updated and integrated into planning is quite another matter). Knowing how societies work may increase understanding of probable civilian responses during policing or enforcement operations, exposing exploitable patterns.[21] This could have direct operational utility because low-level operations are rarely a straightforward technical task. Some of the mistakes of Mogadishu in 1993, for example, could arguably have been avoided if there had been genuine understanding of ethnic and political realities. For this reason, current Department of Defense plans for joint urban operations emphasise the need to understand the religious and

ethnic populations within the battlespace. Used in this loose non-technical sense civil society could represent a potential operational tool – yet it seems unlikely. It cannot satisfy the demands of psychological operations or supplement the intelligence value of commercially available imagery; it is at odds with the current emphasis on technology that demands (and promises) hard material. Part of the problem is that it cannot be targeted or controlled. While image comparison for precisely targeting guided munitions may allow Tomahawk cruise missiles to attack a wider variety of targets, it cannot focus on the nebulous structures of associational life. Policy makers looking for a means of making sense of a destroyed city may grasp at the notion, but civil society is unhelpful as an analytical tool. Its use cannot be operationalised; it cannot tell how non-combatants are affected by infrastructure damage or how curfews, evacuations or forced labour might be better organised. And it cannot be easily controlled; coalition forces could not manage the hawza, the Shi'a clerical establishment running hospitals in the south of Iraq in the aftermath of war.

Making War and Peace

The problems associated with applying civil society to urban operations suggest that the conflation of security and development is flawed. The mixing of aid and air drops in Afghanistan raised similar questions, which will no doubt be repeated in the future. Part of the problem in Afghanistan may simply lie in the fact that there are no real precedents for a war in which a coalition bombed a failed state at the same time as it tried to feed its people. The closest parallel is to be found in Kosovo in 1999 when the UN was unable to cope with the 360,000 Kosovo Muslim refugees who fled to Albania and Macedonia and had to ask NATO to build its refugee camps.[22] The main difference between the two is that in Afghanistan the coalition's military and humanitarian objectives were stated to be broadly equal. Yet such a mix of air strikes and airdrops is increasingly typical of the West's approach to conflict; the devastation of a fragile state is followed by its reconstruction and the whole is legitimised by reference to humanitarian objectives.

There is nothing irrational about mixing arms and aid. Aid may be cheaper and safer than military operations and may even enhance the legitimacy of military action; in Afghanistan the British emphasis on nation building balanced the US focus on hunting bin-Laden.[23] Yet combining arms and aid in the same operation is fundamentally paradoxical. Indeed, much of the world finds it hypocritical. It is also typical of the Western approach. Take the case of the British government. On the one hand, it argues that warfighting capabilities must underpin all military activity. This is based on rational calculations and is relatively uncontroversial. On the other hand, it promotes nation building and using the military as a force for good, which can also be justified as a means of gaining influence. As a result it often appears as if military action is legitimised by the inclusion of humanitarian objectives, thus permitting the formal assertion that 'Fighting power can be applied benignly.'[24] Hence the *British Defence Doctrine*'s statement that warfighting power 'is an especially powerful and influential instrument of policy when it is used to deter or coerce during a measured process of conflict prevention and confrontation management', such as 'operations aimed at securing humanitarian benefit'.[25]

The real value of this statement is that it refers us back to the older and more martial truth referred to in Chapter 6, which is that the best fighters tend to have a sense of moral purpose. Humanitarian objectives could, arguably, provide this (though it is difficult to believe this could ever be the case for civil society). Of course the process is not straightforward. It may be that the cultural context of some states imposes a humanitarian emphasis on the military at the expense of more traditional martial virtues; the situation in Denmark, Germany or Japan may be contrasted with that of France, India or the USA. The experience of US forces in Somalia also suggests that humanitarian objectives only serve to increase morale when the local population is seen to be grateful. In contrast, the attacks on New York and Washington have probably been more productive of high morale and fighting spirit in US forces than any conceivable humanitarian prompt – and similar considerations no doubt applied to al-Qaeda's fighters. Those trapped in the Tora Bora mountains in December 2001 displayed considerable courage in resisting heavy bombing by American B-52s and F18s for as long as they did. For the moral

component of fighting power is the single most critical factor in war and it helps if soldiers believe they are fighting for a worthwhile goal. As the *British Defence Doctrine* admits, 'The combination of war-fighting skills and humanity may seem paradoxical. However, a vitally important part of motivation is the belief in what one is doing: the measured application of force requires discipline and a finely tuned sense of moral purpose.'[26] Nevertheless it remains questionable as to whether humanitarian or developmental objectives can motivate to this extent. The use of civil society as a representative indicator suggests they cannot.

A more fundamental objection to the utility of civil society is that in reality associational groups are irrelevant or merely an obstruction during operations – unless they can fight. And if they fight then the most a soldier can be expected to consider is how to distinguish between combatant and non-combatant.[27] Yet although civil society lacks military utility it is a significant indicator of trends that may yet mould strategic guidance. Furthermore, existing demographic change and urbanisation rates mean that such trends are likely to become more pronounced as urban operations – and reconstruction – become characteristic of future security scenarios. The following three factors may prove influential: the military wish to manage cities, which are human constructs; the effective working of cities is underpinned by human relationships; notions such as civil society are seen as a means of understanding their dynamics. As a result, the promotion of civil society may be thought necessary for political success in urban operations even though it cannot facilitate military success.

A new balance

It is not surprising that liberal notions such as civil society could yet be influential on urban operations. Many operations are now assessed from the perspective of restructuring forces as they develop new roles, or from the standpoint that conventional operations represent but one aspect of security operations. Yet this seems premature from the perspective of urban operations, which remain strikingly pre-modern in many respects. More fundamentally, historical experience suggests that the notion of civil society is irrelevant during war, and unhelpful as an analytical tool. It cannot suggest ways in which a sprawling city

such as Grozny can be managed, let alone a megalopolis the size of Shanghai. It does not help us understand how the inhabitants of Sarajevo survived the siege of 1993 or suggest ways in which the protagonists might be reconciled.[28] The real value of civil society is that it is indicative of the strategic shift in operations made possible by socio-political developments during the 1990s. In other words, civil society has no operational value, but the concerns it represents have, for various reasons, become important and may yet shape strategic guidance. This conclusion raises questions about the utility of civil society and associated notions within the new security paradigm as a whole and, indeed, of the paradigm itself. It also suggests that more conventional approaches to the application of military force will, in practice, dominate for the foreseeable future. The realities of urban operations are the primary reason, but they are reinforced by the West's inability to change structural factors underpinning the security environment. High unemployment, unbalanced population growth, weak or repressive governments and disintegrating infrastructures may result in dislocation and discontent on a scale that the West cannot affect except by the conventional application of military force. Alternative ways of balancing military verities and ambivalent modernities must be found.

Notes

1. Reconstruction is used here in the sense employed in peacekeeping, rather than that associated with the rebuilding of cities such as Warsaw after 1945. Functioning cities are militarily useful but rubbleisation could yet become the preferred option during intractable operations. For a survey of rebuilding see S. Kostof, *The City Assembled: The Elements of Urban Form throughout History* (London: Thames & Hudson, 1992), pp. 260–6.
2. The effect of these processes on security is evident in the operation to provide security assistance in Kabul. It was prompted by awareness of the linkages between warlordism, stabilisation, reconstruction and wider security issues. These include the ties between al-Qaeda supporters and Palestinian militant groups seeking an end to the Israeli occupation that has seemingly encouraged Washington's support for Israel, which breeds greater resentment towards the USA in the Arab world.
3. For a critical reflection on the merger of conflict and development see M. Duffield, *Global Governance and the New Wars: The Merging of*

Development and Security (London: Zed Books, 2001). Duffield does not, however, relate 'new' wars to professional militaries. For an analysis of the extent to which humanitarian imperatives secured a new legitimacy in the 1990s see N. Wheeler, *Saving Strangers: Humanitarian Intervention in International Society* (Oxford: Oxford University Press, 2000). Contrast his 'Protecting Afghan Civilians from the Hell of War', Social Science Research Council symposium, *After September 11: Perspectives from the Social Sciences* (www.ssrc.org/sept11/essays/wheeler.htm). Debate surrounding the military role *vis-à-vis* development is now negligible while that in relation to humanitarian relief is weak in comparison with what it was in the early 1990s. Contrast, for example, L. Gordenker and T. Weiss (eds), *Soldiers, Peacekeepers and Disasters* (Basingstoke: Macmillan/International Peace Academy, 1991).

4. See M. Duffield, 'Post-modern Conflict: Warlords, Post-adjustment States and Private Protection', *Civil Wars*, 1, 1 (1998), pp. 65–102.
5. See M. Berdal, 'Lessons not Learned: The Use of Force in "Peace Operations" in the 1990s', *International Peacekeeping*, 8, 1 (2001), pp. 55–74. Recent operations suggest that one reason for the blurring may be that formal declarations of war are now unusual. Historically, international law was based on a rigid distinction between the states of war and peace but such a clear dividing line is increasingly unrealistic.
6. M. Duffield, J. Macrae and D. Curtis, 'Editorial: Politics and Humanitarian Aid', *Disasters*, 25, 4 (2001), p. 272.
7. 'I'm no warmonger, Blair tells Arab TV', *Evening Standard*, 9 October 2001. Blair conflated the security of 'the people of Afghanistan' with that of the UK population.
8. For recent analyses of the conflicting interests and agendas associated with civil society, see M. Edwards and J. Gaventa (eds), *Global Citizen Action* (Boulder, CO: Lynne Rienner, 2001); D. Schecter, *Sovereign States or Political Communities? Civil Society and Contemporary Politics* (Manchester: Manchester University Press, 2000). The gap between regionally based understandings is bridged in J. Howell and J. Pearce, *Civil Society and Development: A Critical Exploration* (Boulder, CO: Lynne Rienner, 2001). Some of the potential analytic flaws in treating civil society as a catalyst of, or bulwark for, democracy are pointed out in T. Callaghy, 'Civil Society, Democracy, and Economic Change in Africa: A Dissenting Opinion about Resurgent Societies', in J. Harbeson, D. Rothchild and N. Chazan (eds), *Civil Society and the State in Africa* (Boulder, CO: Lynne Rienner, 1994), pp. 231–53; R. Lemarchand, 'Uncivil States and Civil Societies: How Illusion Became Reality', *Journal of Modern African Studies*, 30, 2 (1992), pp. 177–91. Significantly, the 2002 round of the US Institute of Peace's solicited grants competition included a section on civil society as an aspect of strategies for non-violent conflict.

9. The UN's preliminary estimate for rebuilding Afghanistan is $6.5 billion over the first five years. 'UN sets out cost of rebuilding Afghanistan', *Financial Times*, 20 November 2001. Compare the costs of the US-led war. In February 2002 the Pentagon was reported to have spent $7 billion on the war against terrorism, which was forecast to cost more than $27 billion in financial year 2003. See 'Bush unveils $2.1 trillion budget', *The Guardian*, 5 February 2002; 'Biggest Arms Build-up for Two Decades', *Financial Times*, 5 February 2002.
10. L. Axworthy, 'Introduction', in R. McRae and D. Hubert (eds), *Human Security and the New Diplomacy: Protecting People, Promoting Peace* (Montreal: McGill-Queen's University Press, 2001), p. 9. Canada's five foreign-policy priorities for advancing human security are the protection of civilians, peace support operations, conflict prevention, governance and accountability, and public safety. Recent developments in Canadian policy can be followed at www.dfait-maeci.gc.ca/protectingpeople. For trenchant criticisms of the notion see R. Paris, 'Human Security: Paradigm Shift or Hot Air?' *International Security*, 26, 2 (2002), pp. 87–102.
11. For typical assertions see 'Blair sees "pivotal" role for Britain on world stage', *Financial Times*, 5 January 2002.
12. It is non-controversial for liberal democracies such as the UK, whose forces consciously adopt a neutral policy that attempts to address urban or ethnic conflict at an individual level. Contrast the more partisan approach of, for example, the IDF, which deliberately maintains or increases disparities.
13. 'Kindly soldiers "losing their killer instinct"', *The Times*, 11 August 2000; Sir Charles Guthrie, 'The UK's armed forces: warfighters or peacekeepers?', *Jane's Defence Weekly*, 3 January 2001, p. 21. The status of peacekeeping in the US Army is lower. Out of an annual budget of $81 billion, the Army ran its Peacekeeping Institute – originally due for closure in October 2003 – on $200,000 a year. See 'Critics hit loss of training centre for peacekeeping', *Chicago Tribune*, 15 April 2003.
14. There is little evidence of Russian federal forces providing water supplies, for example, to Grozny's inhabitants. See J. Pilloni, 'Burning Corpses in the Streets: Russia's Doctrinal Flaws in the 1995 Fight for Grozny', *Journal of Slavic Military Studies*, 13, 2 (2000), p. 64, note 71; L. Grau and T. Thomas, ' "Soft Log" and Concrete Canyons: Russian Urban Combat Logistics in Grozny', *Marine Corps Gazette*, 83, 10 (1999), pp. 67–75. EmerCom (the Russian Federation Ministry for Civil Defence Matters, Emergency Situations and Liquidating the Consequences of Natural Disasters, MChS) is a 'power ministry' with a specific security role. See M. Galeotti, 'Emergency Presence', *Jane's Intelligence Review* (January 2002), pp. 50–1.
15. See 'Relief workers hit at linking of food drops with air raids', *Financial Times*, 9 October 2001. Rwanda had marked a watershed

in this respect because relief agencies operating in Zaire fed the Hutus responsible for carrying out the 1994 genocide. In an attempt to prevent this happening again many agencies endorsed the Red Cross and Red Crescent code of conduct which stated: 'We shall endeavour not to act as instruments of government foreign policy.' Even so, many agencies were content to be used when Western governments later turned to non-governmental organisations (NGOs) as a means of humanitarian intervention in conflicts in which they had no strategic interest. Many NGOs are also heavily involved with the governments they wish to influence, not least because they depend on official income for their survival. See 'The aid game', *The Guardian*, 24 April 2001.Two further points deserve emphasis. First, humanitarian-relief operations involving the military are never seen as neutral during conflict; external agents are always seen as favouring one side or another, and all sides try to play them off against each other. Second, aid is now the dominant industry in towns in many conflict regions and it is difficult to tell who is in charge. See M. Turner, 'Where NGOs step into shoes governments cannot fill', *Financial Times*, 16 July 2001.

16. 'Mixing arms and aid raises fears', *Financial Times*, 6 October 2001.
17. Hence the problematic nature of making the protection of civilians an integral part of human security. Contrast L. Axworthy in McRae and Hubert, *Human Security*, pp. 4, 6.
18. See F. Zakaria, 'The roots of rage', *Sunday Times*, 14 October 2001; D. Tamari, 'Military Operations in Urban Environments: The Case of Lebanon, 1982', in Desch, *Soldiers in Cities: Military Operations on Urban Terrain*, pp. 36, 42; 'The people who now run the slums', *The Economist*, 24 May 2003, p. 57.
19. Compare United Nations Commission of Experts established pursuant to Security Council Resolution 780, *The Study of the Battle and Siege of Sarajevo, 27 May 1994*, Annex VI-Part1/10 (www.ess.uwe.ac.uk/comexpert/ANX/VI-01.htm).
20. See P. Kratoska, *The Japanese Occupation of Malaya: A Social and Economic History* (London: Hurst, 1998), p. 348. This reinforces an important lesson from strategic bombing during the First World War and the Korean War, that the need for food and shelter produces resignation and apathy rather than political activism.
21. Demarest argues that analyses of urban geography, for example, can expose patterns in organised violence: G. Demarest, 'Geopolitics and Urban Armed Conflict in Latin America', *Small Wars and Insurgencies*, 6, 1 (1995), pp. 44–67. Some degree of cultural awareness is, as Russian forces in Grozny soon recognised, essential if an adversary's decision-making processes are to be understood. But cultural sensitivity is, as might be expected, fraught with pitfalls. Thus US forces in Mogadishu paid lip service to it but consistently blundered. Three examples illustrate this: the Unified

Task Force (UNITAF) systematically failed to recognise the inappropriateness of leaflet drops in an oral culture; US troops refused to accept that an Islamic society found naked bathing to be offensive; and Jonathan Howe, US Special Envoy to Somali, offered an inappropriate Wild West-style reward for General Aideed's arrest in the summer of 1993. Nevertheless, US troops were noticeably more aware of the need to avoid offending Iraqi and Islamic sensibilities in 2003; US marines were ordered to remove the US flag from statues of Saddam Hussein in Baghdad to avoid accusations of conquest. Other forces have deliberately ignored cultural factors even when a significant military cost is involved. In 1982, IDF behaviour was a major reason why the initially acquiescent Shi'a Muslim population of southern Lebanon turned hostile.

22. Paradoxically NATO played a relatively important role in relief work. See M. Pugh, 'Civil–Military Relations in the Kosovo Crisis: An Emerging Hegemony?, *Security Dialogue*, 31, 2 (2000), pp. 229–42.
23. The USA does, however, use foreign assistance as a key component of its anti-terrorism campaign. In the three months after the events of 11 September, over $1 billion in new aid was targeted at Pakistan, Afghanistan and the Central Asian republics. The aim was to reward regional members of the anti-terrorism coalition, stabilise governments facing risks as a result of backing US operations, and mitigate the effects of growing numbers of refugees in regions lacking adequate food and medicine. See 'US Foreign Assistance after 11 September: Resources, Priorities, Conditionalities', International Institute for International Studies, *Strategic Comments*, 7, 10 (2001). And the UK's commitment should not be overestimated. British policy is to send in rapid response forces, withdrawing them as soon as other countries' forces are able to take over.
24. Joint Warfare Publication 0-01, *British Defence Doctrine*, 2nd edn (Shrivenham: Joint Doctrine & Concepts Centre, 2001), p. iii. The phrase was introduced in the 2001 edition.
25. Ibid.
26. Ibid., p. iii.
27. This problem is of greater significance than abstract discussions on whether new war has challenged Clausewitzian distinctions between people, army and government. The Russians experienced immense difficulty in separating combatants from non-combatants in Chechnya. They began by examining suspects for tell-tale bruising or traces of powder or burn marks but soon switched to rounding up Chechen males instead, keeping them in filtration camps. See Grau and Thomas, '"Soft Log" and Concrete Canyons: Russian Urban Combat Logistics in Grozny', p. 72. Compare the response of a US spokesperson to the accusation that US planes killed 100 civilians near Gardez while bombing a compound used by Taliban and al-Qaeda leaders. The spokesperson said that 'follow-up reports

said there was no collateral damage', adding 'If there were civilian injuries, it is the fault of the Taliban and al-Qa'ida for living among innocent people not connected with their crimes.' See 'US accused of killing 100 civilians in Afghan bombing', *The Independent*, 1 January 2002.

28. A vivid description of survival in Sarajevo is found in J. Simpson, *Strange Places: Questionable People* (London: Pan Macmillan, 1999), pp. 441–3, 457–8.

8 Controlling Non-combatants

Tension between the inherent destructiveness of operations and the West's liberal agenda is now a central theme in urban war. The close combat of street fighting is at odds with the West's preference for precision weapons and airpower, while the ability of its conventional armies to engage with terrorism or reconstruction strategies remains contested. But the most critical tension concerns the need to balance minimal own-casualties and low collateral damage with operational effectiveness. The significance of the challenge is further reinforced by the military consensus that advantage lies with the defender and by the political assumption that the West will always be the attacker. This challenge is one of the driving forces behind the search for technological solutions to urban operations, and is considered in more detail in Chapter 9. The emphasis of the current chapter is instead on the other part of the conundrum: low collateral damage.

The need to balance casualties and collateral damage with operational effectiveness illustrates the way the West understands and makes war, but it is not strictly a dilemma; priorities change according to the national interests at stake, and it would be shortsighted to assume that the West will never be prepared to sustain casualties or destroy, occupy or garrison cities.[1] Themes such as humanitarian relief, stabilisation and reconstruction are now integrated into military operations, but they were irrelevant

in early 1945; the bombing of Dresden, which killed at least 135,000, was not followed by public outcry in the UK because winning the war was the priority and destruction was a means to that end. When, after the war, devastation was followed by reconstruction it was for sound tactical reasons, even if political objectives were more important at the strategic level; an occupied city facing shortages of food, water and medicine posed public-health, logistical and security problems that could overwhelm the most effective military support system. Soviet forces extracted the maximum reparations from their zone and sectors, but strategic imperatives ensured that the UK paid £80 million towards the upkeep of defeated Germany in 1946, when inadequate rations, lack of domestic heating, and the extensive destruction of housing meant there was a real danger of major epidemics.[2] It cannot be stressed too strongly that it is less than 60 years since Allied bombers reduced parts of Hamburg in a firestorm, and that the stated objective of the US area offensive over Japan was the destruction of all Japanese cities; napalm and incendiaries were purposely dropped to fuel an inferno in Tokyo. And it is only 20 years ago that American governments officials maintained that the USA must retain the capability and option to destroy 200 major Soviet cities.[3] It is true that the West seemingly no longer has the will to destroy on such a scale, and the morality of overtly targeting a population now seems highly questionable. Infrastructural war of the type seen in the Gulf War and Kosovo severely punishes civilians (in 1991 post-industrial Iraq was 'relegated to a pre-industrial age'), but destruction is not the objective and the linkage is camouflaged by the development of legal regimes accommodating the use of technologies, such as precision munitions, that permit the targeting of dual-use facilities.[4] Whether this means that a radical shift has occurred is, however, questionable. A new approach to operations is emerging in the West: urban operations are to be understood as being about control rather than destruction. But what has yet to be acknowledged is that control continues to be a matter of either persuasion or destruction, and that both are closely linked in war.

Controlling Cities

Control has three facets once urban operations are in progress. It refers to:

- the military utility of a functioning city
- to the territorial imperatives driving operations
- to the physical control of civilians.

Urban war traditionally destroys cities, yet it seems likely that military control of a city during policing, enforcement and post-conflict scenarios is easier if electricity, water and sewerage systems work; if public-health concerns are lower; if logistics are easier; and if populations are generally more compliant.

The concept of territoriality, which explains why urban operations develop as they do, is probably more important as far as understanding operations is concerned. Territorial imperatives are no longer fashionable as an explanatory factor (ethnicity and anti-terrorism replace them) yet the linkage between geography and control remains as strong as ever – witness fierce fighting between Arabs and Kurds for the possession of the northern Iraqi town of Mosul in 2003, the Balkan wars and Israel's current operations in Palestinian territories. Indeed Misha Glenny states that territory, not blood lust, lies at the heart of the Bosnian wars, while Alexandros Yannis argues that the Kosovo conflict 'is a dispute over control of territory'.[5] Many on the left, meanwhile, see the Palestinian conflict as essentially a territorial dispute, rather than an existential war for Israeli survival. But territoriality is about more than ground; it also refers to 'the attempt to affect, influence, or control actions and interactions (of people, things, and relationships) by asserting and attempting to enforce control over a specific geographical area'.[6] Intentionally expanding a dominant group's space or restricting that of a subordinate group achieves it, and either a multinational force or its adversaries may apply it. Territorial policies imposed by external forces may even displace attention away from the root causes of conflict within a city to conflicts among territorial spaces themselves, which can extend the scale of combat. Equally, polarised cities, because they encapsulate larger conflicts, may become transformed from urban organisms into symbols of wider territorial (that is, sovereignty) claims.

Yet 'it is misleading to speak of "the city" as if it were an organic entity' that can be controlled; cities are places 'occupied and used by many actors'.[7] The most controversial of these tend to be non-combatants, definitions of which have shifted over the years and now extend to cover all those not formally part of a military organisation or force. The reason for this is that, intentionally or accidentally, non-combatants shape the city battlespace.[8] In an ideal world military operations should be carried out only among consenting adults, but in practice operations take place within, against, and by means of civilians: Israeli helicopter gunships kill Islamic militant leaders in crowded buildings in Gaza, and Palestinian teenagers bomb crowded Israeli cafes; Chechen fighters target Russian civilians in Grozny, while Russians seize the relatives of Chechen suspects; Somali militiamen use women and children as willing human shields; and Iraqi irregulars wear civilian clothing. And separating military and civilian targets was as problematic and controversial in 2003 as it was in 1991. In February 1991, US F-117 strikes destroyed Baghdad's Al Firdos bunker as a command and control facility, but on the night it was destroyed its upper levels housed families of government officials. Twelve years later US forces repeatedly shelled the city's Palestine Hotel where more than 130 foreign journalists were based, arguing that it was being used by the Iraqi regime and was the source of 'significant enemy fire'. The claim was sharply contested by the journalists concerned. In return the military spokesman at US Central Command stated that the coalition did not target journalists but that US actions were 'consistent with the inherent right of self-defence' and that 'the area of combat operations is very dangerous'.[9] At best the presence of civilians encourages the media, non-governmental and intergovernmental organisations (NGOs and IGOs) to pay overly critical attention to what the military do. Consequently anything that lessens the threat or irritant value non-combatants pose is potentially useful. Not surprisingly, non-combatant control is increasingly recognised as a key emergent issue for Western forces.

Control also deserves attention for three additional reasons. It provides a key to what has become a central dilemma in contemporary operations. It illustrates the processes of doctrinal development and suggests ways in which urban doctrine might develop. And it indicates the direction urban operations may

take, especially if future conflict remains at the level of small wars and insurgencies, because targeting civilians is usually necessary in the grey operational areas that shade into warfighting. This possibility, combined with the continuing lack of appropriate analytical tools with which to understand the human architecture of cities, makes it important to consider the appropriate balance between a persuasive ('heart and minds' in British usage) approach and a robustly coercive policy.

Targeting Civilians

A leitmotif of this book is that attempts to reconcile what is known of the characteristics of cities with the realities of urban operations and the restrictive legal and moral frameworks of contemporary Western operations have made little progress in recent years. The nature of urban war, with its friction and unpredictability, is fundamentally unchanged from that in 1945, but operations must now be reconciled with targeting for casualty avoidance when practical, the prevention of unwarranted violence, political objectives such as regime change and reconstruction, discretionary intervention intended to 'correct' abuses of human rights within states, multinational interoperability and the sometimes conflicting agenda of IGOs and NGOs. Most operations are multinational and many are multi-agency. The promotion of initiatives encouraging formal civil–military co-operation (as in CIMIC in the Balkans)[10] is evidence of this trend, as are the 'integrated operations' that coincidentally expand the scope of military functions. Indeed, this is one reason for the USA's Project Lincolnia, which specifically linked the interagency political–military planning process to a joint experimental headquarters.

Operations are easily politicised too, especially in non-warfighting scenarios. One reason for this is that militaries and ministries of defence engage with such issues from the point of view of intragovernmental politics. Internal politics is itself a potentially important theme in the development of urban doctrine because it not only politicises the idea of control but also shapes the framing of policy at the strategic level. The trend is fostered in the UK by the existence of a forceful Department for International Development (DFID) that judges conflict and

certain security issues (issues traditionally thought to fall within the remit of the Foreign Office and Ministry of Defence) as relevant to the Labour government's development agenda and its own legitimate concerns. This is not to dismiss developmentalism as irrelevant to urban operations. As Chapter 7 notes, social divisions are often acute within cities, which suggests that they should be acknowledged by strategic-level planning. Military operations interact with social trends, as well as with new technologies and reconfigurations of political authority in geopolitically critical cities, so it makes sense to acknowledge the implications of political pressures. The appropriate balance is, however, difficult to identify. The inequalities and power struggles evident in cities often result from a widening gap between the rich and the poor, and are reflected in economic apartheid, literacy levels and unfulfilled expectations, but the direct military significance of this is questionable. The control of undesirable movements or threats to critical resources within cities may demand a military response, as may large-scale rioting, but military action cannot solve deep-seated political problems. A line needs to be drawn between policy alternatives.[11]

These trends are evident in the British Army's approach to control. Until recently civilian control as an objective did not explicitly shape British military doctrine. Operations in open terrain have long needed to consider the control of civilians (the Boer War is one such case), but doctrine for warfighting in open terrain did not need to specifically consider civilian control or the identification of non-combatants. Civilians represented a vulnerability to be exploited by strategic bombing or a potential threat to be countered or controlled in counterinsurgency (COIN), but it was not until the end of the Cold War that civilians became a significant influence on doctrine. Warfighting – and COIN – doctrine proved inadequate for the long-term requirements of peace building, and as the 1990s progressed the political terrain of operations seemed more important than the physical environment. At the same time the military role expanded to acknowledge the need for co-operation with civilian agencies, and to include civilian-related tasks such as policing and crowd management. The trend was reflected in the development of peace support operations (PSO – the general term was adopted by NATO in 1997) designed to end conflict by promoting conciliation, and by

peacekeeping being promoted on the basis of creating conditions in which civilian agencies could redress the causes of conflict, rather than the simple defeat of a designated enemy.[12] The centrality of consent and legitimacy in PSO doctrine is further evidence of this. It is concerns such as these that differentiate contemporary urban operations from those of earlier decades.

Such factors have shaped recent developments yet the extent to which they have fundamentally rebalanced operations is questionable. Two reasons are notable. The first concerns the evolutionary nature of most military approaches to control. Significantly, the current British approach to control derives from the hearts-and-minds approach developed during COIN operations in Malaya and other predominantly rural countries during the 1960s and 1970s.[13] Indeed, many of the basic concepts and principles now used in peace enforcement and in security operations of the type seen in southern Iraq in 2003 are based on experience gained during COIN: minimum force and local co-operation have many common links. As the foreword to JWP 3-01 *Peace Support Operations* suggests, peace enforcement 'may be considered very similar to counter-insurgency but in a United Nations rather than colonial context'. A COIN approach to civilians is now unfashionable yet it proved relevant in cities such as Basra during Operation Iraqi Freedom. Furthermore, targeting non-combatants is never something only the West's adversaries do; the attention the USA and UK devote to psychological operations emphasises that they also use civilian populations to shape a battlespace.

The second reason is that control is shaped by military necessity or pragmatism as much as humanitarianism.[14] According to international law, commanders have moral and legal responsibilities towards the civilians in their areas that can be met only by co-operation with civil organisations. They also need to establish relationships with a variety of civilian authorities and organisations for military reasons; good relations might, after all, be enough to deny an advantage to ones adversaries. As NATO documents explicitly acknowledge, civil–military co-operation (CIMIC) is a combat support function, its purpose being to facilitate the military task by smoothing relations between NATO military and the local population. And short-term operations conducted by liberal democracies for reasons of regime change

or the promotion of regional stability depend on control to achieve their objectives efficiently; only then can forces be withdrawn quickly and safely (hence the UK's emphasis on hearts and minds in Iraq in 2003). But none of this detracts from the fact that military operations invariably target civilians to a greater or lesser degree. Targeting civilians is civilised by the language of PSO, legitimised in enforcement and brutalised in warfighting – but it always happens. Some contemporary operations are intended to remove a named individual (such as Generals Noriega in Panama, Aideed in Mogadishu or Saddam Hussein), rather than control a population as such, but sooner or later most require the acquiescence or support of a population. Control is most explicit in COIN and counterterrorist operations, but it is precisely these types of operations that seem most likely in the aftermath of 11 September 2001. An observation made by Trinquier 40 years ago remains relevant: 'The conduct of military operations in a large city, in the midst of the population, without the benefit of the powerful weapons it possesses, is certainly one of the most delicate and complex problems ever to face an army.'[15]

Non-combatants have military significance. So too does the physical environment. But it is the combination of the two that makes control during urban operations more than simply operations on urban terrain. The control of non-combatants within urban operations becomes an issue in its own right because cities can act as catalysts through which conflict is inflamed or lessened. Current doctrine characterises non-combatants as bystanders or as an unavoidable nuisance yet they may be as formidable a factor as the physical infrastructure. They hide irregulars, block roads and present humanitarian challenges. They may be vectors for disease. Their presence may shape rules of engagement (ROE), small-unit decision making, weapons applications, information operations, sustainment planning and the way in which an end state is defined. Yet Western forces still do not really understand how important urban populations may be to the success of an operation.

Given that the West generally prefers to defeat rather than destroy its adversaries it therefore needs to develop a range of options to deal with – and if necessary to exploit – non-combatants: it needs to enhance and widen its understanding of control. The

variety of potential urban missions means that a range of methods is necessary, from genuine persuasion to overt coercion, and these are probably best provided by a coherent, generic, internal-security doctrine tailored to cities. Psychological operations, crowd management and CIMIC are important, but so too are more war- or occupation-related capabilities such as distinguishing non-combatants from combatants, controlling prisoners and refugees, maintaining public health and coercing or punishing recalcitrants. A balance between persuasion and coercion is needed.

Defining control

The phrase 'non-combatant control' is generally taken to refer to operations intended to influence non-combatant attitudes and behaviour in a manner useful to friendly-force objectives. It can be relatively benign, overtly malign or ambiguous, and is based on a combination of techniques intended to induce or coerce, expand or consolidate consent or co-operation in areas where there is opposition or non-compliance.[16] In peacekeeping it usually takes the form of marking routes to shelters, distributing food, conducting psychological operations intended to deceive, enforcing evacuation or using non-lethal weapons to move non-combatants out of an area in which they could be used as human shields. It can also take the form of curfew or, in war-related activities, forced labour in areas of military operations.

Control involves either persuasion or coercion, both of which are underpinned by the threat of physical force. Its extremes are indicated here by the phrases 'hearts and minds' and (more emotively) 'search and destroy'. Hearts and minds sounds anachronistic, but the phrase is used because its influence underpins PSO doctrine and it rebalances the technocratic associations of 'psychological operations' and 'population shaping activities'.[17] Search and destroy is, perhaps, too strong for most contemporary scenarios, but it is used here to indicate a robust war-centric approach to non-combatants thought to represent a threat to operations. It offsets the tendency to understand urban operations in terms of current liberal values and the trend to extend culturally specific practices into universal doctrine. Of course the two phrases represent an oversimplification. Many objections

and exceptions can be made – the same forces can deliver both, and most Western forces assume their appropriateness according to context – but their use introduces clarity. The low end of the contemporary operational spectrum is therefore represented here by British crowd-control techniques based on the use of minimum force and consent. The other extreme is exemplified by the Russian approach in Grozny in 1999–2000. The relevance of the UK's experience in Northern Ireland to either the developing world or warfighting is debatable, but it typifies an influential approach. The Russian case is unsatisfactory for different reasons. It is most unlikely that the UK or its allies would choose to be involved in a Grozny, but Russia is used because there are few alternatives. Israeli practice is culturally distinct and controversial; the US approach (often expressed in terms of the purpose of the military being to 'kill people and break things') is not necessarily transferable; while debate continues to surround the part played by French forces in Algiers.

Persuasion's limits

Equilibrium must be struck between persuasion and coercion, between avoiding excessive casualties and collateral damage, maintaining minimum levels of domestic and international support, and minimising risks to allied forces while maximising military effectiveness. This is difficult enough in peacekeeping, but is likely to prove infinitely more so during the multiple transitions involved in urban operations. The problem is potentially critical because it is evident that although the West is competent at hearts-and-minds campaigns it is neither ready nor configured to fight the transitional operations exemplified by the notions of three-block or humanitarian war.

A persuasive approach has limits. It may be an efficient means of shaping certain environments, but it is also slow and is perceived as a weakness by many adversaries. And Western persuasiveness may be feeble in comparison with that of a ruthless adversary. Much depends on the type of operation, but urban operations often encourage cycles of violence in which casualties are both the byproduct and objective of a campaign. This is not a specifically urban phenomenon, as the use of amputation in Sierra Leone makes clear, but the close quarters and environment

of cities seems particularly conducive to its use – witness the systematic use of 'protective violence' in contemporary Algeria.[18] Once again, historical experience suggests that urban fighting invariably tends towards destruction and violence. One reason for this is that civilians often act as a shaping force, vulnerability or sanctuary, and are targeted as such. Civilians have shaped tactics, strategy and planning in many recent operations, serving as force multipliers, human shields or vulnerabilities according to context. Civilians may even show a great determination to fight, although more generally they do not. As Grozny shows, it is unrealistic to expect that the population will have been evacuated, will not get in the way or will not have the resources or determination to fight. Urban areas may be cleared before fighting takes place – there are many documented cases of this in north-west Europe in 1945 – but most will not. Civilians involved in urban operations at the end of a long war or in harsh physical conditions may lack the stamina to be obstructive or fight, but those in other circumstances may not. Civilian casualties have even ended a militarily successful campaign. The Israeli bombing of a UN refugee camp in Qana in south Lebanon in 1996, for instance, resulted in international outrage and a hurriedly negotiated ceasefire that stopped the successful Israeli operation.[19]

Paradoxically civilians may present the greatest problem at the lower levels of operations where Western forces would seem to have proficiency in their management; that is, in the riots or sporadic acts of armed violence that are not necessarily a military problem but, in practice, demand a low-level military or paramilitary response. The challenge results from the scale of many disturbances, with whole communities being involved, and from the strategic potential of all such flash points. Riots in the town of Mitrovica in 2000 illustrate the potential problem. Violence erupted several times in early February, leaving at least ten people dead and dozens injured, and on 21 February more than 60,000 Albanians broke through the centre of the town to a bridge separating the Serb minority in the north from the Albanian community in the south. The violence was eventually contained by NATO-led troops firing volleys of tear gas and using batons to disperse Albanian protesters, but the local and international media quickly accused the multinational troops concerned (from Belgium, Canada, Denmark, France, Germany,

Italy, UK and the USA) of failing to provide adequate security.[20] Significantly, the military response also illustrates the way in which relevant doctrine does not necessarily translate into appropriate action. The French troops involved were specifically accused of failing to provide sufficient security, yet French doctrine acknowledges the dangers associated with the loss of credibility brought about by an inability to use the (minimum) force necessary to ensure security.

Between the extremes of Qana and Mitrovica lie every possible variant of control. One interesting recent war-related development can be illustrated by reference to the asymmetric targeting of civilians by NATO in Kosovo. Of course Kosovo was not an urban war as such and part of the purpose of the air campaign was to avoid destroying Pristina block by block, with the inevitable civilian casualties. Nevertheless, Kosovo indicates what might be called the Western way of war, and its course suggests that civilians are once again the real targets for attack. First, the NATO air campaign was justified primarily in terms of stopping actual and expected killings and expulsions by Serbs in the Serbian province, but pressure to attack fixed targets, rather than mobile military targets, meant that, in practice, targets were chosen whose destruction had a significant effect on civilians.[21] Second, this suggests that, despite a technologically based manipulation of civilian society, control continues to be a matter of either persuasion or destruction and that the two are close in wartime. It is true that NATO paid great attention to legitimising its strategies in terms of a humanitarian crisis and the defence of 'common values'. Effects-based operations were also emphasised as a means of targeting functional capabilities, rather than the use of more conventional forms of targeting. But NATO's attacks on Serbian electrical power transformers were arguably prompted by the fact that electrical power represented a key psychological civilian target.[22] Such actions are not unprecedented for the same holds true for the bombing of electricity grids during the 1991 Gulf War. In fact targeting in the Gulf War was closely linked to the high level of urbanisation in the region; that 72 per cent of the Iraqi population lived in towns and cities, combined with the factors of industrialisation and climate, meant that electricity was critical. Water supplies and hospitals were theoretically immune from the bombing during the war but systematic attacks

on the electrical grid inevitably meant that proscribed targets were hit. Thus discrimination in targeting magnified the effects of destruction in both Kosovo and Iraq and fundamentally threatened civilian populations. The themes of humanitarian intervention, political expediency and special interests (primarily those associated with airpower) cannot be easily disentangled in contemporary operations. Neither can persuasion nor control.

Control Variables

A number of factors shape Western methods of control and casualty avoidance, including ROE, cultural or institutional norms, doctrinal guidance, leadership, frustration and the desire to punish.

It is usual to say that the West's ability to pursue a robust approach to civilian control is limited by its restrictive ROE. This is true but it is equally clear that ROE are flexible. Balancing restrictive and permissive ROE is difficult in the face of the ubiquitous media presence so ROE normally conform to political rather than military logic, but much depends on the interests at stake. It is difficult to judge the extent to which American ROE have shifted in the aftermath of 11 September 2001, for instance, for the theme of 'self-defense of a preemptive nature' has been consistently strong, regardless of international disquiet at its manifestations. But President Bush's conviction that war has been transformed is suggestive of a shift in perception; so too is the centrality of the 'War on Terrorism' to his presidency, and his determination to pursue and punish those seeking to commit acts of mass-casualty aggression against the USA. Less controversially, the attacking force in almost every modern urban battle has begun operations with a strict set of ROE designed to limit collateral damage, but all have invariably been eased in the course of operations because minimising friendly casualties always takes precedence over the desire to avoid civilian casualties and collateral damage. The result is observable in UNOSOM operations in Mogadishu in 1993. After questions were asked about an attack on Digfer hospital, when UNOSOM forces were pursuing General Aided, an unnamed UN official was quoted as saying 'The normal rules of engagement do not apply in this nation.'[23]

The desire to avoid casualties may be weak in the first instance, or weak leadership, politics or organisational and doctrinal factors may mean that damage can be disregarded. From the beginning of the second intifada, for example, the IDF moved within minutes from tear gas to rubber or plastics-coated metal bullets and live ammunition.[24] Concerns for civilian casualties and collateral damage further declined as IDF casualties rose. It soon became apparent that heavy power was the only way to minimise own casualties and maintain an appropriate operational tempo; by October 2000 the IDF was making extensive use of attack helicopters (such as the Apache AH-64A) to manage unrest (and blast out snipers), on the basis that they were able to move low over targets and distinguish between civilians and combatants.[25] And notions of restraint are far from absolute. In October 2000, Israeli troops, which were supposedly showing 'restraint', shot and wounded at least 69 people in clashes with Palestinians in Hebron, Bethlehem and Nablus. The relative nature of 'restraint' should thus be seen in the context of what is judged necessary. For IDF actions are theoretically guided by a 'purity of arms' doctrine, which states that arms will be used only 'for the purpose of subduing the enemy to the necessary extent' and that the IDF serviceman will 'limit his use of force so as to prevent unnecessary harm to human life and limb, dignity and property'. But restraint is offset by the primary 'basic point' of Israeli security doctrine, which is that Israel cannot afford to lose a war.[26]

Non-lethal weapons

The role technology might play in such circumstances is difficult to judge; much depends on the type of operation. As a senior French officer commented after the riot in Mitrovica, if rioters know that troops will only employ tear gas 'then you are in trouble'.[27] The development of non-lethal weapons (NLWs) could make civilian control easier in the face of restrictive ROE, or it could simply rephrase the problem.

The terminology and purpose of this class of weapons varies. They include 'non-lethal', 'less-than-lethal', 'pre-lethal', 'sub-lethal' and 'limited destructive capability'; in 2001, for example, the British Joint Doctrine and Concepts Centre replaced non-lethal with limited destructive capability so as to reflect the range of

destructive capabilities needed. For simplicity's sake 'less lethal' is probably the most accurate term because many of the other terms used imply that the weapons concerned are not lethal or are intended as a more humane means of destruction. Even so non-lethal is the most widely used term and is therefore used here. The purpose of the weapons – the word is significant – is defined by DoD policy as:

> systems that are explicitly designed and primarily employed so as to incapacitate personnel or material, while minimizing fatalities, permanent injury to personnel, and undesired damage to property and the environment. … non-lethal weapons are intended to *significantly reduce* the probability of such fatalities or injuries as compared with traditional military weapons which achieve their effects through the physical destruction of targets.[28]

The basic assumption is that 'pursuing "the ability to produce a broader range of potential weapons effects," … directly supports the operational concept of *full dimensional protection*'. In other words, NLWs represent a 'critical warfighting capability', rather than some middle ground. This is consistent with the British understanding that NLWs offer additional capabilities to deter, defend or attack, rather than a separate unique capability. The technology is thus intended to provide a graduated response and, ideally, should overcome resistance without killing. Even so, until the mid-1990s NLWs attracted little attention; lethal and non-lethals were classed together for ROE purposes. The development of NLWs for urban operations has since been led by the USA, with the catalyst for its programme being the problems US forces encountered during crowd control in Somalia, Haiti and Bosnia.[29] A Joint Non-lethal Weapons Directorate (JNLWD), based at Quantico, VA, was set up in 1997 to co-ordinate the Pentagon's NLW projects, and a *Joint Concept for Non-lethal Weapons* paper was published in 1998. In 2003, US Marines and Army units deployed to Iraq with NLWs intended for crowd control, area denial and clearance, and deterrence; their weapons included rubber, stingball and flashbang munitions, high-intensity lights and pepper spray.[30]

The operational utility of NLWs is difficult to judge, not least because they range from the batons, sponge grenades and

dye-marking kits packaged as a hand-thrown grenade device used during the 1997 Bosnian elections, to the IDF's D-9 bulldozers and futuristic nerve-stimulation guns; the technologies explored by the JNLWD include directed energy, acoustical and optical weapons and electronic nerve stimulation. The weapons undoubtedly fill a gap at the tactical level in circumstances in which lethal force is counterproductive or undesirable; they can be used to channel non-combatants away from combat, clear roadblocks, protect targets and reduce collateral damage. They expand the options available to a commander. Plastics technology can ensure the rapid provision of shelters, while foams, directed-energy beams and chemical irritants could create physical barriers. In the future, sensors and robotics could monitor buildings; nerve-stimulation weapons could control crowds; and information systems exploit existing infrastructure such as local television or radio stations; secure cellular communications and automatic translation devices may be another possibility. Yet there are many problems associated with such technologies. All are immature and unreliable, and scale and precision remain problematic – the US troops in Baghdad relied on conventional weapons when looters threatened them in the summer of 2003. Current debates on restraint and proportionality will not necessarily be answered by the development of NLWs; electronic means of control (currently seen as a promising technology by many security forces) are, indeed, more likely to provoke controversy than resolve it. The transferability of the US approach is, moreover, questioned by Ben-Horin who notes the operational and legal limitations of US-style NLWs.[31]

What is clear is that NLWs will not necessarily restrain brutality. It has been suggested that one reason for the violence of operations in Grozny in January 1995, for example, was the lack of weapons and concepts suited to precise rather than indiscriminate urban warfare: 'When the tools of war provide only excessive force, psychologies change and atrocities result.'[32] It is true that Russian weapons were designed to produce massive effects from a distance and offered no intermediate options. Buildings were demolished with sheets of artillery fire or air strikes in order to destroy a single sniper. But other explanatory factors must be taken into account, including harsh national cultures, ethnic hatred, incompetent leaders, lack of training and deliberate

policy. Similarly it has been claimed that the high number of Palestinian casualties during the al-Aqsa intifada has emphasised the lack of NLWs in the Israeli armoury; that the IDF was compelled to use what was regarded as excessive force because it lacked effective non-lethal weaponry.[33] It is true that the equipment available (including rubber and plastics-coated bullets) was often incompatible with given standoff ranges and ROE, but the argument is unconvincing; the IDF has more experience to build on than most.

In practice, reliance on technology to control non-combatants appears more likely to lead to crude or inefficient methods of population management. In his study of Israeli COIN operations in South Lebanon, for instance, Jones points out that it was Israeli reliance on technology, rather than troops trained in COIN methods, that resulted in incidents such as the slaughter of 102 Lebanese civilians sheltering in a UN compound at Qana in 1996.[34] He argues that the often disproportionate use of force by Israeli forces resulted from their adherence to an offensive military doctrine that failed to calibrate the level of force used. Whatever the reason, the Israeli Army, which prides itself on its offensive skills, is clearly uncomfortable with static or patrolling operations; it has been more successful at dealing with conventional threats than combating terrorism or controlling crowds. Significantly, Israel remains unclear as to the most effective way to prosecute a war against an elusive enemy that possesses few fixed military targets or bases, but which denies the right of the Jewish state to exist. The dynamics deserve further attention, not least because similar challenges may yet confront the Western security community.

NLWs appear to offer a middle ground as far as control is concerned, yet it seems unlikely that they will offer significant tactical or operational advantages in the near future, and their use will not necessarily make operations easier or less destructive; they may merely make the infliction of pain more compatible with liberal consciences. NLWs must be complementary to, compatible with and easily integrated into current and planned conventional weapons systems and training if they are to be useful in urban operations. Ironically, the equipment with the greatest utility across a range of operations probably remains rifles with fixed bayonets, barbed wire, riot control agents, loudhailers and flexicuffs.

Control and Infrastructure War

Operational objectives are currently understood in terms of control rather than devastation, and this is unsurprising given the concerns associated with regime change, reconstruction and liberal norms. Most approaches to controlling non-combatants remain conventional and rely on the threat or use of physical force, regardless of the type of operation concerned or technologies employed. Most are manpower intensive and depend on coherent policies, good intelligence and effective patrolling and static duties capable of ensuring security; their absence in the spring of 2003 meant that looting continued in Iraq's cities and curfews were not enforced. Most psychological operations are relatively unsophisticated, flexicuffs are more useful than electronic guns or sticky foam; and civilians are rarely trusted during war. Effects-based operations may be used to target functional capabilities (rather than more conventional forms of targeting cities) but NATO's attacks on Serbian electrical power transformers, to take a controversial example, were arguably prompted by the fact that electrical power represents a key psychological civilian target. Thus discrimination in targeting magnified the effects of destruction in Belgrade and threatened civilians as a means of pressurising the Milosevic government. High technology was used for conventional coercive purposes.

Future doctrine for controlling civilians will probably evolve from a mix of proven practice, conventional objectives and contemporary imperatives and resources. There is nothing inherently wrong in this pragmatic approach. Peacekeeping doctrine built on COIN, and the adaptation of existing urban doctrine and strategies, supplemented by lessons learned in the most recent operation, seem likely. That the British Army considered peacekeeping operations to be manageable without specific doctrinal guidance throughout the 1980s suggests this is probable as far as British forces are concerned. As a result, urban skills will be once again learnt during operations – which will continue to be understood in tactical terms. In practice this means that control will continue to be a matter of either persuasion or destruction, and that distinctions between the two will remain ambiguous, especially in enforcement and warfighting operations when collateral

damage must be offset by own casualties and tactical success. Trinquier's statement that 'the goal of *modern warfare* is control of the populace' could yet regain relevance.[35]

Notes

1. Coalition forces no longer formally occupy cities – a classification that entails responsibilities under the Geneva Conventions – but many cities are placed under the equivalent of protectorates.
2. See F. Donnison, *Civil Affairs and Military Government North-West Europe 1944–1946* (London: HMSO, 1961). Historically more civilians die after battles than during them; a major influenza epidemic occurred in 1918, for instance. A detailed analysis of this phenomenon is available in J. Kovago, 'On the Threshold of the Winter 1945–1946', referred to in P. Bracken, 'Urban Sprawl and NATO Defence', *Survival*, 18, 6 (1976), pp. 254–60.
3. See J. Richelson, 'Population Targeting and US Strategic Doctrine', *Journal of Strategic Studies*, 8, 1 (1985), pp. 5–21.
4. M. Weller (ed.), *Iraq and Kuwait: The Hostilities and Their Aftermath* (Cambridge: Grotius, 1993), p. 598. The result is a 'veritable casuistry of war'. M. Ignatieff, *Virtual War: Kosovo and Beyond* (London: Chatto & Windus, 2000), pp. 198–9. Compare S. Myrow, 'Waging War on the Advice of Counsel: The Role of Operational Law in the Gulf War', *USAFA Journal of Legal Studies*, 7 (1996/97), (www.usafa.af.mil/dfl/journal/volume7/Myrow.html); N. White, 'The Legality of Bombing in the Name of Humanity', *Journal of Conflict and Security Law*, 5, 1 (2000), pp. 27–43.
5. M. Glenny, *The Fall of Yugoslavia*, 3rd edn (London: Penguin, 1996), pp. 170, 83, 238; A. Yannis, 'Kosovo under International Administration', *Survival*, 43, 2 (2001), p. 31.
6. A. Burnett and P. Taylor, *Political Studies from Spatial Perspectives: Anglo-American Essays on Political Geography* (Chichester: John Wiley, 1981), p. 55.
7. P. Marcuse and R. van Kempen, 'Conclusion: A Changed Spatial Order', in P. Marcuse and R. van Kempen (eds), *Globalizing Cities: A New Spatial Order* (Oxford: Blackwell, 2000), p. 265.
8. 'Civilian' is used here in a general, non-technical sense to refer to non-military and non-paramilitary actors, while 'non-combatant' refers to those civilians not taking an active part in operations. International law makes a fundamental distinction between civilians and combatants. Combatants are members of the armed forces of a party to a conflict (other than medical or chaplains) according to the Geneva protocol of 1977. In countries experiencing civil war there may also be individuals or groups that cannot be categorised as members of a uniformed group but are still combatants.

Shaping may be deliberate or accidental. Before the Israel Defense Force (IDF) moved into the densely populated city of Tyre in 1982 it used leaflets and loudspeakers to advise the inhabitants to leave for the nearby beaches. Unfortunately no provision was made for controlling the ensuing movements, with the result that 30,000 refugees soon returned to the city, seriously hindering the IDF's advance. Shaping the battlespace requires commanders to identify the centres of gravity or critical nodes of a city that provide leverage when controlled. Clausewitz defined centres of gravity as the hub of power on which everything depends.

The argument developed here was originally presented in 'Hearts and Minds or Search and Destroy? Controlling Civilians in Urban Operations', *Small Wars and Insurgencies*, 13, 1 (2002), pp. 1–24.

9. 'US forces kill three foreign journalists in office attacks', *Financial Times*, 9 April 2003.
10. NATO defines CIMIC as the arrangements that support the relationship between commanders and national authorities, and civil populations in areas in which NATO forces are or plan to be employed. The arrangements include co-operation with NGOs and IGOs. See Allied Joint Operations Doctrine MC411 (1997), p. 21-1, para. 2103. More generally the British understanding approximates to the UN definition used by the Office for the Co-ordination of Humanitarian Affairs (OCHA), which is also supported by the UK's Department for International Development (DFID). MC411 states that CIMIC is an integral part of the planning process for any operation, and that it is achieved by taking into account the legal, administrative, social, cultural, economic and environmental context of operations. The need for separate formal structures promoting co-operation is, however, controversial in the British government and CIMIC now forms only a small part of the UK's revised *Peace Support Operations* manual.
11. In practice the alternatives tend to be political compromise or ambiguity. While the British government promotes peacekeeping and democracy, the MoD emphasises that all operations (including those of peacekeeping and crisis response) require warfighting capabilities. Official MoD statements such as the following then fudge the issue: 'Optimising the force structure for either a warfighting or non-warfighting role is not the way forward. Building a force by planning for both will produce a more robust force structure with wider utility.' Ministry of Defence, *The Future Strategic Context for Defence* (London, 2001), para. 102.
12. This is not the same as the military complaint heard during operations that too many PSO are planned without an appropriate end-state in mind.
13. The term 'hearts and minds' (seemingly developed first in Malaya) is used here in the sense employed in F. Kitson's *Low Intensity Operations* (London: Faber & Faber, 1971) and *Bunch of Five*

(London: Faber & Faber, 1977). For details of the British approach to COIN see T. Mockaitis, *British Counterinsurgency, 1916–60* (London: Macmillan, 1990). It is easy to alienate local populations regardless of the emphasis placed on hearts and minds. British soldiers searching the Catholic Falls Road area of Belfast achieved this in 1970; lacking formal search training, they wrecked houses as they discovered quantities of terrorist weapons. The imposition of curfews compounded the problem. This experience shaped the UK approach in southern Iraq in 2003, causing senior British officers to comment unfavourably on the aggressive fashion with which US forces handled civilians. Sir Mike Jackson, head of the British Army, for example, pointedly stated that 'We are not interested in gratuitous violence.' See 'Allies divided over battle for hearts and minds', *The Guardian*, 1 April 2003. Compare 'Tensions high as US forces kill up to 13 civilians', *Financial Times*, 30 April 2003. Whatever the cause of the behaviour of US forces, such incidents suggest that there is a real need to prepare for situations in which conventional beliefs and values are tested beyond the bounds of current doctrine and training. Even so, the hearts-and-minds campaigns of most forces are robust; the Viet Cong in Saigon, for instance, systematically undermined confidence in the South's government by eliminating officials and supporters of the government. Compare P. Eedle, 'Al-Qaeda Takes Fight for "Hearts and Minds" to the Web', *Jane's Intelligence Review* (August 2002), pp. 24–6.

14. 'Military necessity is the principle which justifies measures of regulated force not forbidden by international law which are indispensable for securing the prompt submission of the enemy, with the least possible expenditure of economic and human resources.' US Department of the Air Force Pamphlet 110-31, *International Law: The Conduct of Armed Conflict and Air Operations*, 19 November 1976, para. 1-3a(1). Quoted in C. Dunlap, 'Technology: Recomplicating Moral Life for the Nation's Defenders', *Parameters* (Autumn 1999), pp. 24–53.
15. R. Trinquier, *Modern Warfare: A French View of Counterinsurgency*, trans. D. Lee (London: Pall Mall Press, 1964), p. 51.
16. Control is often ambiguous. Thus rumours of the use of AC-130 Spectre gunships had a devastating effect on morale in Kandahar in 2001. High-level bombing originally concentrated on the airport, barracks and targets outside the city. But up to three-quarters of the usual population of 800,000 soon left the city, driven out by the noise of the AC-130s circling overhead, fear of more bombs, and water shortages caused by a direct American hit on the main water pumping system.
17. Today's 'psychological operations' and 'population shaping activities' are not necessarily more sophisticated than previous hearts-and-minds programmes. Psychological operations may be as dependent

on loudhailers and intimidation as any post-colonial operation. Thus slow-moving EC-130CE aircraft broadcast messages through loudhailers over Taliban-held areas in 2001: 'Attention, Taliban, You are condemned. Did you know that?'. In 2003 robotic pre-recorded voices told Baghdad's inhabitants not to attack US forces. See 'Troops go behind enemy lines', *Daily Telegraph*, 20 October 2001; R. Smith, 'The Use of Psychological Operations, and their Role in the Return to Normality in Bosnia–Herzegovina: A Company Commander's Perspective, February–May 1996', *British Army Review*, 114 (1997), pp. 13–18. Contrast B. Shacochis's *Haiti*: *The Immaculate Invasion* (London: Bloomsbury, 1999), pp. 314–15. Intelligence preparation of the battlefield (IPB) is, theoretically, more sophisticated. Its purpose is to enhance understanding of a population and thus support mission success, but its value depends on human judgement. There is no appropriate equivalent to battle damage assessment.

18. L. Martinez, *The Algerian Civil War 1990–1998*, trans. J. Derrick (London: Hurst, 2000), p. 117.
19. The West should note that previous Israeli claims of precision weapons worked against them. The United Nations commission investigating the incident concluded that the shelling of the UN compound was most unlikely to have been the result of technical or procedural errors. See D. Turns, 'Some Reflections on the Conflict in Southern Lebanon: The "Qana Incident" and International Humanitarian Law', *Journal of Conflict and Security Law*, 5, 2 (2000), pp. 177–209.
20. *The Guardian*, 22 February 2000; ITN, 'Uneasy calm follows Kosovo clashes', 22 February 2000 (www.compuserve.co.uk/channels/news/itn/story). For riots as flashpoints see M. Stanton, 'Riot Control for the 1990s', *Infantry*, 86, 1 (January–February 1996), pp. 22–9. For riots and internal conflict to become armed conflict there must be organised and sustainable armed opposition to a government. See P. Verri, *Dictionary of the International Law of Armed Conflict* (Geneva: International Committee of the Red Cross, 1992).
21. The most disturbing lesson of the air campaign for many was that its most effective aspect involved hurting Serbia proper, including its population, rather than directly attacking Serb forces in Kosovo. This has implications for proxy actions in an urban environment. See A. Roberts, 'NATO's "Humanitarian War" over Kosovo', *Survival*, 41, 3 (1999), pp. 102–23.
22. The argument is developed by W. Arkin, 'Bombing Electricity: Relic of the Past or Wave of the Future?', unpublished paper presented at International Studies Association annual convention, Chicago 2001.
23. A. de Waal, *Famine Crimes: Politics and the Disaster Relief Industry in Africa* (Oxford: James Currey and Indiana University Press, 1997), p. 187.
24. 'Rights groups assail use of military force', *Financial Times*, 24 October 2000.

25. 'Israel uses helicopters in fight with Palestinians', *Jane's Defence Weekly*, 11 October 200, p. 30.
26. See www.idf.il/english/doctrine/doctrine.stm.
27. R. Pengelly, 'French Army in Profile: From Hollow Force to Hard Core', *Jane's International Defence Review*, 6 (2000), p. 49. The two basic categories of non-lethal weapons are counterpersonnel and countermaterial. The first helps reduce casualties and the second renders equipment and facilities unusable but without their complete destruction.
28. *Joint Concept for Non-lethal Weapons* (1998), p. 3 (www.concepts.quantico.usmc.mil/nonleth.htm). US DoD definitions relate to weapons that were designed to be less than lethal from the beginning. They do not include weapons systems (such as information or electronic warfare) or other systems affecting vehicle engines (such as embrittlers or obscurants) that have non-fatal capabilities that do not form part of their original design.
29. See D. Herbert, 'Non-lethal Weaponry: From Tactical to Strategic Application', *JFQ* (Spring 1999), p. 87; D. Lovelace and S. Metz, *Nonlethality and American Land Power: Strategic Context and Operational Concepts* (Carlisle, PA: Strategic Studies Institute, 1998). A list of possible applications of NLW technologies is provided in R. Ben-Horin, 'Non-lethal Weapons Theory, Practice, and what Lies Between', *Strategic Assessment*, 3, 4 (2001) (wwwe.tau.ac.il/jcss/sa).
30. 'Exotic Non-lethal weapons to quell mob rule,' *Jane's Defence Weekly*, 14 May 2003, p. 15.
31. Ben-Horin, 'Non-lethal Weapons'. Although calmatives, irritants and inflammatory agents, and comparable non-lethal weapons are authorised for domestic riot control and law enforcement, they are prohibited in war by the *1981 United Nations Convention on Prohibitions or Restrictions on the use of Certain Conventional Weapons that may be deemed excessively Injurious, including Amended Protocol II* (May 1996).
32. P. Churchill Hutton, 'Weapons of Restraint', *Armed Forces Journal International* (May 2000), p. 53. It is sometimes argued that NLWs can contribute to benign humanitarian intervention. See N. Lewer and S. Schofield, *Non-lethal Weapons: A Fatal Attraction* (London: Zed Books, 1997). Contrast Dunlap's point that 'technological advances bear great responsibility for the exponential growth in the sheer destructiveness of war'. C. Dunlap, 'Technology: Recomplicating Moral Life', p. 24.
33. D. Eshel, 'Israel Investigates Non-lethal Options', *Jane's Intelligence Review* (September 2001), pp. 46–7.
34. C. Jones, 'Israeli Counter-Insurgency Strategy and the War in South Lebanon 1985–97', *Small Wars and Insurgencies*, 8, 3 (1997), pp. 82–108.
35. Trinquier, *Modern Warfare*, p. 16. Italics in original.

9 The Intractable Nature of Urban Operations

The fundamental problem of urban operations is their intractable nature, which is most apparent in war. For illiberal states this means accommodating the intensive and often inconclusive nature of even militarily successful operations. For liberal democracies it entails reconciling the characteristics of urban operations with today's cultural norms and restrictive legal and moral framework. The problem explains why urban operations encapsulate military, political and social trends, and why they offer a powerful lens generating new insights and understanding into conflict. The prevalence of policing and enforcement operations during peacekeeping and the successful use of airpower and precision munitions in the 1990s obscured the predicament but the controversies surrounding Russian and Israeli operations in Grozny and the Palestinian territories confirm its significance, as does (though for rather different reasons) the USA's refusal to accept the authority of the International Criminal Court.[1]

The problem exists because high levels of violence are inherent in urban war, regardless of the nationality of those involved or the scale of operations. Anatol Lieven, who was in Grozny during 1995, noted, 'even for properly trained, well-fed and well-motivated troops, house-to-house fighting is a bloody, nasty, hole-and-corner, terrifying business that creates exceptional strains on combatants'.[2] Notions of minimal damage always evaporate in the face of heavy own-casualties. When Russian forces suffered heavy

losses in 1994–96, their tactical solution was a scorched-earth policy in which airpower and artillery reduced cities to rubble before manoeuvre forces entered to mop up. And their weapon of choice appears to have been the TOS-1 heavy flame-thrower system. This exploits the effects of high temperature and extreme pressure by firing 30 incendiary rockets singly or in salvos; it releases large clouds of flammable gas, creating massive blasts. Direct-fire artillery always provides great advantage. Twelve years before Grozny, for example, the Israel Defense Force (IDF) made extensive use of point-blank, direct fire artillery (such as 155mm self-propelled howitzers) during fighting in Beirut in a technique called sniping. This reduced strong points and reinforced buildings when tank rounds capable of penetrating concrete structures were not available.[3]

Military necessity, pragmatism, frustration and fear – all combine in urban war to create a pre-modern style of fighting at odds with many contemporary Western norms. It may mean that, as in 1943, 'a small attacking force in street fighting cannot afford to take prisoners; it is too easy for them to escape and … do great damage to their captors'.[4] At worst brutality and torture become commonplace, as has been the case with Russian forces in Grozny. Since the Russian Army was a cruel organisation at the best of times it is not surprising that journalists regularly reported rapes, shootings and the torture of non-combatants by its troops. The relatively random nature of army atrocities in the mid-1990s was, however, over-matched by the systematic brutality of the Ministry of the Interior's cleansing operations in towns such as Gudermes and Shali. Houses were burnt with firebombs and the residents killed with flame throwers as they emerged; artillery was used on survivors. The Chechens responded with equal ferocity.

Violence is also evident in many enforcement operations. Its scale and sanction in Mogadishu and Kismayo in 1993 were significantly less than in Grozny yet brutality and impunity were sometimes routine among many of the units present. After Pakistani UN troops opened fire with a heavy machine gun on a crowd in the middle of Mogadishu on 12 June, killing at least ten people in the presence of many foreign journalists, they denied that the incident occurred. Soldiers from the USA, Belgium, Canada, Italy, France, Nigeria and other countries harassed, beat and killed Somalis (though only the Canadian contingent

was subject to a thorough investigation).[5] On several occasions UN forces claimed that Geneva Conventions did not apply to them. Counterinsurgency and counterterrorism operations are notorious for violating human rights.

More recent controversies, such as those surrounding NATO's bombing of Belgrade in 1999, US bombings of social gatherings in Afghanistan in 2002 and the failure of coalition forces to prevent the looting of Iraqi hospitals in 2003, suggests that tension between military objectives and humanitarian imperatives is at the heart of the security and policy challenges confronting liberal democracies. For the intractability of urban operations leads to a dilemma. Two possibilities exist. If the West does not intervene in cities in which dangerous regimes exist or cruel events take place, an unscrupulous government could develop weapons of mass destruction or a humanitarian tragedy could occur. If, however, Western forces intervene they run the risk of becoming involved in an especially destructive form of war. This is the dilemma at the heart of contemporary operations.

In policy terms, the central question confronting today's political and military leaders is less about prediction than about reconciling a restrictive legal and moral framework with what is known of the nature of urban war. For urban war will force liberal democracies to confront their own values. This challenge, which is the subject of this chapter, is both fundamental and of immediate concern. But, before the seemingly intractable nature of urban operations can be explored, two further concerns must be acknowledged. First, the analytical challenges of urban operations remain significant. Urban operations still lack a theoretical framework. This is important because success is never an isolated technical or tactical process, as the experiences of the UK in Belfast, Russia in Grozny, Israel in Gaza and the USA in Baghdad make clear. It also means that urban operations require a contextual approach that incorporates tactical challenges within a coherent policy framework. It is not enough to say, for example, that social trends determine the technology used in war when such trends result from the interaction of physical, social and structural continuities. Linked to this is the second concern: urban operations present their greatest challenge at the levels of strategy and policy.

Analytical Challenges

Despite the expanding remit of Western forces into stabilisation, anti-terrorism and reconstruction scenarios there is no overarching theoretical or analytical framework for military operations in an urbanised world. There is no shortage of initiatives addressing tactical issues, but the strategic, operational and analytical value of cities receives significantly less attention. And there is no defence or security equivalent to the wider academic study of urbanisation, social change and natural hazards, or the long-term issues of urban safety and sustainability. The importance of geo-political factors in urban operations is increasingly acknowledged, as is the potential requirement for multinational and multi-agency co-operation, yet there is no contextual model incorporating the lessons learned from police or planning studies into urban operations. Urban operations take place in what is by far the most complex of all the environments in which the military operate so the absence of such a perspective makes the omission striking. Why this should be so is debatable when strategic prediction is a recognised part of government business. The reluctance of governments (as opposed to insurgents or terrorists) to acknowledge, let alone explore, the potential strategic utility of cities may result from lingering memories of the Second World War, the determination to avoid another Mogadishu or the relative absence of high-profile urban contingencies. It may be because the inherent costs, physical characteristics and tactical constraints associated with urban terrain are recognised. Or it may be that urban operations (and combat in particular) have not yet been realistically expressed in terms of surgical or precision operations so there is little pressure to investigate the subject.

The strategic vacuum is unlikely to be filled by the development of new doctrine or concepts in the near future. Ministries of defence regularly produce strategic context papers but they tend to focus on the generalised political implications of global urbanisation, regional challenges and military missions. Meanwhile professional military work is directed to maximising fighting power at the operational and tactical levels, prompted by knowledge of the unpleasant reality of urban combat. The military naturally focus on identifying the implications of key trends for force structures and capability requirements, or on enhancing a

battle group's ability to conduct close operations within a combined or multinational arms context, rather than analysing linkages between different aspects of security. Attention is given instead to doctrinal issues such as how to relate the tempo of urban operations to manoeuvreist warfare. Such an emphasis is understandable, but it is also essentially reactive and protective.

There is as yet no coherent understanding of the strategic potential of urban operations (expeditionary or otherwise), or of the difficulties of maintaining stable territorially based structures and organisations in a globalised world in the aftermath of 11 September 2001. The need may be recognised, but the strategic utility of urban operations remains unexplored. Similar considerations apply to the operational-level potential of cities. It may be argued that this does not matter. It is, after all, difficult to predict major discontinuities with the potential to change fundamentally strategic circumstances and operations, and no one can identify in advance the type of tactics the West's adversaries are likely to evolve in response to its usual approach. The equivalent of a Project Lincolnia is unlikely to remedy the fact that distinctions between the various phases of urban operations are imprecise, simultaneous transitional operations difficult to conceptualise, and there is no method or doctrine for translating political demands for precision combat into tactics. This argument is further supported by the widespread belief (explicitly stated in the UK's future-army project) that significant short-term improvements in urban operations are more likely to be influenced by training and equipment than by emerging concepts, doctrine or policy.

Nevertheless, the current approach to operations in cities, which will probably represent the politically significant area in the future battlespace, often results in an incoherence that is reinforced by negligence. Combined-arms warfare and innovative tactics ensured military success in Baghdad in April 2003, for instance, but success was accompanied by dubious coalition policies that tolerated looting. It was followed by a seemingly incoherent reconstruction programme that resulted in continuing insecurity, the rapid recall of a number of senior US officials and unexpected decisions on important issues such as demobilisation. The demobilisation of 400,000 Iraqi soldiers was announced in May, for example, even though no support programmes existed.

Such a decision suggests that the potential implications of demobilisation for military operations and the countryside surrounding cities were neglected; the likelihood of increased criminality or insurgency was evidently not thought through. In consequence the analytical and policy challenges of urban operations are significant, not least because many of the issues underpinning operations, such as national interest, globalisation, information technology, social change and, indeed, the application of military force itself, to say nothing of warfighting, are themselves controversial and need to be seen in the wider security context. It is important to produce an analytical framework for urban operations for military reasons too. The value of nodal analysis, for example, and the mapping and modelling of cities and the critical dependencies within them, is greater within a coherent strategic framework; a change in one of the elements underpinning a functionally important city could set in train a cascade of reflexive changes in others. Operations in a hub or world city could, for instance, extend the notion of an enemy well beyond the parties immediately involved. Identifying technical issues, such as the changing hazard environment across a range of cities, with their security implications represents a formidable task too. Such considerations emphasise the need for a contextual understanding. For just as the Cold War placed security studies at the centre of the intellectual and political challenges confronting the West, so urbanisation may result in urban operations shaping many of the critical security issues of the twenty-first century.

A wider perspective

The challenges of urban operations extend far beyond those of geometry. Of course terrain remains critical at the tactical and operational levels, but the geo-political importance of urbanisation means it is also necessary to incorporate insights from a range of disciplines beyond defence and security studies in order to understand the possibilities inherent in such operations. The battlespace is now multifaceted, having expanded to include terrain, time, space, perception and, potentially, the activities supporting socio-political stability and reconstruction. Thus urban studies, disaster management, police studies, architecture,

anthropology, sociology and geography – all can illuminate the potential variables influencing, and strategic importance of, urban operations. They can contribute to building a consensual model of urban operations capable of assessing the applicability of current standard scenarios, for example, and the consequences of the increasingly common mix of natural, technological and social hazards within cities. Contemporary urban trends may have military significance because the resultant interactive mix could present problems that are not yet recognised.[6]

Contextualising full-spectrum operations in this way should deepen understanding of the dynamics at work in cities. Only then can the outcome of military actions be truly exploited and consolidated. Acknowledging overlapping issues will not guarantee understanding on its own but it should provide insights into the physical and human environment and into what success might mean. And a contextual approach could address the fact that there are also more fundamental theoretical issues (often linked to strategy) to be considered. For what is important is not that there is a spatial linkage between operations but that there is a conceptual link. The development of such an approach might involve consideration of how compellent campaigns (designed to change the behaviour of a state or city by the manipulation of costs and benefits) might be framed, and whether shaping operations could take place at a greater distance than decisive operations. Such a development would also extend the current move away from a linear understanding of conflict based on the traditional hierarchical framework of separate strategic, operational and tactical levels. It would enhance the more integrated approach that has resulted from this move. Policy goals, for instance, now represent a central core, framed by strategic direction, while the operational dimension includes the tactical capabilities needed to achieve the stated goals. Thus success at the tactical level translates into operational impact and strategic significance. Typical investigations based on a contextual understanding might as a result focus on the analysis of how military operations interact with trends such as the diffusion of new technologies and threats, and worldwide economic restructuring and integration.

Adopting a wider perspective should facilitate the identification of the myths and misconceptions of urban operations, raise new

questions and open up fresh areas for research; the construction of national or cultural views of urban war is one possibility.[7] It will encourage consideration of the unexpected or exceptional events that might compel the West to shift the focus of its attention. Such flexibility is especially important for urban operations because cities are not neutral environments; they can bend or distort the conventional linkages on which our understanding of cities – and thus urban operations – is based. It is for such reasons that we need to review the narrow range of assumptions on which current expectations and approaches are built.

Strategic challenges

The strategic challenges of urban operations are becoming clearer. Markedly more attention is now given to the geo-political and social factors underpinning urban infrastructure and operations than was the case in the mid-1990s; the control of non-combatants is widely recognised as a key emergent issue, as is the military utility of functioning cities. The trend may have been prompted by the development of such techniques as cultural intelligence and intelligence preparation of the battlefield (IPB); the identification of transnational organised crime as a security threat within cities; and the close association with cities of those responsible for the attacks of 11 September 2001. The September attacks focused attention on counterterrorism as an enforcement issue, rather than urban operations as such, but the US preference for regime change and state reconstruction further emphasises the need to understand the human architecture of cities. Even so, much remains to be done. Attention still needs to be raised from tactics to overarching concepts such as the limitations of city fighting, the worldwide integration of economic assets and types of city and infrastructure.[8]

Precisely how urban operations might fit into strategic policies remains unclear, partly because the cultural and economic conditions of many of the cities in which the West is potentially interested are changing in complex ways. The effects of internationalisation and globalisation must be factored in too, especially in relation to mega-cities. This is because, although multinational operations in a mega-city may seem unlikely, instability in a city the size of Seoul could affect Western interests in unforeseen

ways. For mega-cities contain a large proportion of the world's material investments and economic wealth, and are often important by virtue of their role in the global economy and trading networks.[9] What this might mean can be seen from disaster studies, as the effects of many disasters are not necessarily dissimilar to those of conflict. The 1995 Hanshin earthquake (which devastated the Kobe area of Japan) showed that a single metropolitan disaster in a rich country can produce economic losses – estimated at more than US$92 billion in the Hanshin case – that shake the global reinsurance industry. Six years later the attacks on the World Trade Center shattered the USA's legacy, circuit-switched telephone network, which was centralised and did not possess inbuilt redundancy capacities. As a result, the 6 million private circuits and data lines that had passed through switching centres in or near the WTC were destroyed. An understanding of the way in which operations in an important city could disrupt global economic functioning should be developed alongside conventional military concerns.

It may prove as necessary to redefine urban operations in the 2020s, as it was to redefine security in the 1990s. As the World Bank has pointed out, there is potential for the political importance of cities (and the provinces they often represent) to increase at the expense of national governments; certain cities are becoming important actors on the world stage and could represent a future security issue in their own right.[10] For such reasons the strategic and policy challenges of future urban operations will probably be greater than many in the past. And they could undermine conventional military-based analyses. The current Western approach to urban operations does not address this. It is therefore likely that future operations, especially those in important cities, will be marked by policy incoherence and will be of an essentially *ad hoc* nature regardless of the quality of predictive work.

Moral Challenges

The strategic challenges of future urban operations are daunting, but the associated moral challenges are potentially more stubborn and will intensify any existing analytical confusion. It is not

simply that brutality and torture are probable in urban war – the behaviour of French paratroopers in Algiers and Russian forces in Chechnya represents too consistent a theme to be dismissed. It does not result from the use of technology to erode non-combatant immunity. Neither is the professional identity of the military as technocrats of violence an issue. Troops may be subject to regulation by national and international law, and the self-imposed constraints of restrictive rules of engagement (ROE), but they are also reliant on physical force, and 'the most obvious use of military force is to destroy something'.[11] One reason for this is that they must not be seen to fail (which may explain why most particularly dislike being called upon to perform non-military duties in peacekeeping). Troops possess escalation dominance in order to manage or contain a situation; they cannot afford to be seen as weak by either violent crowds, agencies such as UN civilian police (for whom they represent the ultimate enforcers or rescue squad), or their enemies.

The presence of civilians is arguably a more significant explanatory factor. This results less from ethical issues than from the practical problems associated with distinguishing between combatants and non-combatants, and the fact that civilians tend to get in the way before, during and after operations. That humanitarian and infrastructural wars are seemingly designed to affect civilians accentuates the ambiguity. As a result, governments and commanders must maximise military effectiveness while maintaining domestic and international support, minimising risks to own and allied forces, and keeping casualties and collateral damage at tolerable levels. Political pressures to minimise non-combatant casualties may even be a condition for success. This could introduce an additional complexity factor, for while minimising non-combatant casualties is desirable it is not in and of itself an operational objective; it cannot represent the reason for a military operation. The situation is, inevitably, obscure, and the tangled themes of political expediency, special interests (especially those associated with airpower) and humanitarian intervention displayed in the West's most recent operations suggest that further clarity is unlikely. Indeed, they suggest that urban operations will be accompanied by increased tensions. The reason is that, whereas the situation in Kosovo and Afghanistan allowed most operations to be conducted from a distance, urban

fighting and security operations require close contact. What is unambiguous is that civilians remain a target of operations. Targeting civilians does not necessarily mean killing them, though the laws and conventions of war permit the killing of non-combatants under certain conditions, as when troops are put at risk because an enemy is firing from behind them. But cities are rarely empty and the presence of non-combatants usually shapes the battlespace.

While overt brutality of the type and on the scale employed by Russian forces in Grozny is regarded as illegitimate or criminal by liberal democracies (as are strategic bombing campaigns of the type seen in the Second World War), civilians remain a target for many of the West's coercive and psychological attacks no matter what propaganda and policy statements say. In its operation in Kosovo, for example, NATO undoubtedly paid great attention to legitimising strategies based on operations defined in terms of a humanitarian crisis and a defence of 'common values'. Effects-based operations were also used as a means of targeting functional capabilities rather than more conventional forms of targeting. But discrimination in targeting magnified the effects of destruction in Kosovo and, combined with new thinking about effects-based operations, fundamentally threatened civilians. In practice, targets (such as power transformers) were chosen whose destruction had a significant effect on civilians. As Roberts has noted, such damage is 'a salutary reminder' that there are moral (and environmental) problems with the idea of low-risk war.[12] More recently, coalition leaders justified war in Afghanistan and Iraq on the basis that it was waged against a repressive regime rather than 'the people' of the country concerned.

Controversy over weapons

Although effects-based approaches aroused a certain amount of public controversy in some countries at the time of the Kosovo war, NATO governments were generally able to work with pressure groups campaigning against specific operations or types of weapons and damp down their expectations or criticisms. But the continuing emphasis on warfighting and the strong possibility

that military requirements will run counter to liberal democratic norms and non-governmental organisation (NGO) interests during urban operations suggest that the moral – and political – challenges are unlikely to lessen. And public disquiet may expand from concern over the targeting or treatment of non-combatants to protest regarding the use of militarily useful weapons. According to Article 23 (e) of the Hague Regulations, military action in war is shaped by the requirement to demonstrate the military advantage to be gained from a course of action and it is forbidden to use methods of war that may be expected to cause unnecessary suffering. International law does not try to prevent the infliction of suffering – it is understood as inherent in war – so much as prevent superfluous injury and pain, but the distinction to laypeople is, not surprisingly, often unclear. The result is evident in relation to the use of anti-personnel mines, cluster bombs, phosphorus, flechettes, flame-throwers and novel explosives. Such weapons have tactical value in urban war but are seen by many as creating a disproportionate effect in either risk or damage. The Ottawa Convention outlawing the use of land mines provides a classic illustration of the influence of such objections, yet cluster bombs, by their sheer numbers, are also likely to kill and maim civilians for years to come. Furthermore, cluster bombs are dropped in such large numbers at any one time that, with a failure rate of up to one in ten, they effectively create a minefield. The British Army fired more than 2,000 cluster munitions during the battle for Basra in 2003, while use of the weapons was reportedly much more widespread among US forces. The canisters used in Afghanistan in October 2001 were even dropped alongside food packs of the same colour. The use of phosphorus, an incendiary agent that causes severe burns and whose smoke is toxic, has long been controversial, as has the use of flechettes (or darts). Flechettes are a type of anti-personnel tank-fired shell that contains 10,000–14,000 steel darts that spread in a wide arc when their canister detonates. Both were reportedly used by Israel in southern Lebanon and Russia in Chechnya.

Flame and novel explosives

The tension between liberal democratic norms, public expectations, the military's emphasis on the fundamental importance of warfighting capabilities and the realities of urban combat will

be explicit during street fighting. The use of flame in particular provides a pertinent illustration of what this pressure might mean because it illustrates the inevitable mix of operational and ethical issues. The operational and tactical value of flame in a shanty town of timber or corrugated-iron buildings may or may not be questionable, but its value in most cities is historically proven. Its use is, however, regarded as highly controversial if not immoral by most Western publics. Flame is frequently spoken of as banned by the UN Weapons Convention of 1981 though the Convention does not in fact forbid the use of flame and incendiary weapons against military targets. The Convention seeks only to prevent suffering which serves no useful military purpose. It may be that the question of when to use flame has not been seriously asked in recent years or it may be that its absence has more to do with operational than ethical issues. Or it may be that the presence of combatants is the critical issue because when non-combatants are not present the choice of weapons is limited only by the principle of proportionality. But this does not mean that it is not a sensitive topic. The controversy surrounding the destruction by UN coalition aircraft of an Iraqi military column withdrawing from Kuwait City on a highway to Basra, Iraq, during the last hours of the 1991 Gulf War is evidence of this.[13]

Operational issues are probably the most significant restraint. The flame-thrower is often described in professional journals as a low-technology system that is highly effective, particularly in psychological terms, but which is regrettably no longer in the military inventory.[14] This is a matter of interpretation. The long tongue of flame typically seen in 1945 or Vietnam is no longer characteristic of contemporary weapons systems – the methods of delivery 60 years ago were bulky and heavy and, if used today, would expose the operator to what would be considered as unjustifiable risks. But some thermobaric weapons are widely regarded as flame weapons, even if the flame appears only when the projectile reaches its target. And projectiles continue to be developed even though recent technology has not produced suitable man-portable flame-throwers, and problems of weight, range and logistics prevent their systematic use. While it may be common sense to avoid the use of flame-throwers in combustible shanty towns their desirability as psychologically effective weapons remains as great as ever.[15]

The use of flame is an emotive topic but the issue encapsulating the moral challenge at the heart of contemporary Western urban operations is that of novel explosives, of the thermobaric weapons which use a massive wave of heat and blast pressure to destroy. Thermobarics are controversial in that they have the effect of a tactical nuclear weapon without the residual radiation. The weapon, previously known as the fuel-air bomb, was developed during Vietnam as an alternative to napalm. The concept is straightforward. The two-part warhead detonates, forming an aerosol cloud. The cloud is then ignited and the resultant fireball sears the surrounding area while consuming the oxygen. The lack of oxygen creates an enormous overpressure that is the primary means of destroying the personnel, structures or minefields that are the weapon's targets. The Russian fuel-air 'flame-thrower', for example, creates a fireball 50 metres in diameter that reaches temperatures of 2,500ºF.[16]

The tactical value of such weaponry is proven. Fuel-air weapons were used by Soviet forces against the mujahidin in Afghanistan and by Iraq's Republican Guard during the Gulf War. More recently, fuel-air weapons were probably the single most important development of the third battle of Grozny in terms of equipment.[17] Russian forces have shown that their use is both practical and effective when collateral damage is not a problem – and Russia believes that urban combat requires deliberate reduction. Russian forces are now on their third generation of fuel-air weapons, having created more than 14 to deliver the munitions since development began in the late 1970s. The current RPO-A Shmel is a versatile 11-kg, single-shot, shoulder-fired infantry rocket flame-thrower. It delivers accurate fire over a 600-metre range and produces an effect comparable to that of a 152mm artillery round.

Russia openly exports the weapons and their associated technology; the transfer of thermobaric production technology to China is known to have occurred. Use of the weapons by US forces appears similarly uncontroversial. Thus US warplanes dropped thermobarics in March 2002 as a means of suffocating al-Qaeda fighters entrenched in fortified caves in the eastern Afghan province of Pakhtia. Furthermore, their deployment (evidently the result of a re-evaluation of the USA's retired fuel-air explosive arsenal) was preceded by the use of a 15,000lb

BLU-82, variously called the Daisy Cutter or Big Blue, to strike deeply buried targets in a cave near Tora Bora, close to the border with Pakistan. This bomb, which is no longer produced, is not a fuel-air explosive but a GSX jellied slurry blast explosive that generates a massive pressure wave.[18] American recognition of the utility of thermobaric weapons is further evidenced by the work of the Defense Threat Reduction Agency (DTRA), which leads development of thermobarics under an Advanced Concept Technology Demonstration (ACTD) programme and which requested $60 million in financial year 2002 to accelerate research of thermobarics and other 'energetic material technology'. The DTRA told *Jane's Defence Review* that 'the warheads will be incorporated into numerous existing weapons systems'. The DTRA also argue that thermobarics could be used to strike targets located near civilian centres because their lack of an explosive warhead 'helps to minimise collateral damage'.[19] The US Naval Surface Warfare Center, meanwhile, is working with the defence contractor Lockheed Martin to develop a thermobaric warhead capable of penetrating bunkers and (using intense heat at low pressure) preventing the dispersal of poisonous chemical or biological agents. The warhead is intended to produce a chlorine gas that will lower the risk of widespread contamination. In March 2003, US Marines entered Baghdad using shoulder-fired weapons armed with thermobaric explosive warheads.

Thermobaric technology produces light disposable weapons that are extremely destructive of human bodies, it renders conventional body armour useless, and it is of proven utility against heavily fortified positions or the buildings typical of cities. Acknowledgement of its existence, let alone development, has, however, been greeted very differently in the UK. The contrasting rationalities involved in the technology's development in the UK are illustrative of the potential tensions – and the level of debate – surrounding coalition war in cities, and of the possible consequences of a fundamental difference of approach to cities between the UK and the USA. They are also indicative of the level at which national culture and technology play a real part in shaping operations.

The development of thermobaric weapons by the UK was brought to public attention in the course of a controversial radio interview in January 2001. The Ministry of Defence (MoD)

responded to public criticism by emphasising that British forces did not yet have such weapons but that it would be 'irresponsible' not to consider their possible use given their wide distribution; the UK is therefore developing a lightweight, precision hand-held device based on explosive particles rather than flammable vapour or gas. An army spokesman (who missed the point of the original criticism) said that 'We cannot legally produce something that is a flame weapon but we can produce something that is a blast weapon.'[20]

The UK Liberal Democrat spokesman Menzies Campbell argued that such a weapon would breach the spirit of the Geneva Conventions, while Joost Hilterman of the NGO Human Rights Watch expressed grave concern that it would be used near population centres. Similar arguments had, in fact, already been presented by Project SirUS, a campaign sponsored by the International Committee of the Red Cross which seeks to outlaw weapons that can be shown to cause 'superfluous injury or unnecessary suffering', a phrase taken from the convention on certain conventional weapons.[21] If, as seems likely, the development of a thermobaric grenade specifically for urban operations is judged undesirable by British authorities, the resultant (political) decision will be based on claims that the effects of such weapons are disproportionate and indiscriminate. This will be in direct contrast to the prevailing military judgement that banning thermobaric weapons poses a serious threat to British forces, to their operational capabilities and to the development of emerging technologies. If such weapons are effectively banned, however, military attention will immediately focus on the development of an alternative system capable of circumnavigating the ethical and political challenges of thermobaric weapons in a manner reminiscent of that associated with anti-personnel landmines. Land mines were a very effective means of providing force protection in an urban environment, and abandoning them on signing the Ottawa Convention immediately meant that a replacement system was needed.[22]

Searching for alternatives

The search for alternatives is noteworthy as far as technology is concerned because it suggests that, although the role of specific weapons is important in the debate, the values assigned to them

are variable and other factors, such as cultural or political norms, are equally significant. Support for this may be found in RAND research that concludes that the technologies employed in urban operations in the 1990s did not differ significantly from those employed before the 1980s.[23] Weapons remained essentially the same and it was only politically inspired ROE that prohibited the stronger side from using advanced tanks and artillery.

It is possible that the current UK debate over the acceptability of thermobaric weapons will prove redundant as alternative systems are developed which can deliver a comparable military effect in a manner tolerated by public opinion. Indeed the potential for information warfare and new forms of conflict suggests that the debate about thermobaric weapons or their equivalent could prove peripheral in the long term. Yet it seems unlikely. Novel weapons, such as those targeting the electricity supplies on which modern societies are increasingly dependent, suggests one possible future. The CBU-102, for example, disperses a latticework web of threads that short-circuit switching equipment, causing electricity stations to automatically shut down. It was developed specifically to reduce the humanitarian effects of war while precisely targeting a militarily useful network. Yet the value of such weapons in a Somalia or Afghanistan is questionable, as is their ability to prevail in urban warfighting.

Ironically the moral challenges of urban operations are likely to remain strong even if novel weapons can alleviate the human costs of war. Indeed, they are reinforced by the trend, seen in Kosovo and Afghanistan, to combine humanitarian and legal norms with technological advantages and self-justifying conceptions of national interest – itself something of an ethical challenge. The result is that governments need to take the moral high ground, and may even rule against the use of militarily effective weapons. The high ground is, however, movable.[24] After air strikes in the no-fly zone over Iraq in February 2001, for instance, UK officials argued that the raids, which killed two civilians, were 'humanitarian' because they prevented repression by Saddam Hussein. Colin Powell, the US secretary of state, disingenuously argued that the bombings were protective. More to the point, air raids and thermobaric weapons or their equivalent fulfil the military need to directly destroy targets in a way that a CBU-102 cannot. Whether thermobaric weapons would be publicly acceptable in

the face of a chemical attack akin to that undertaken by Iraq on Basra or Khorramshah in the Iran–Iraq war is unclear, but the use of a weapon akin to prohibited nerve or blister gas or cyanide on Western citizens could result in a dramatic adjustment of Western values. Iraq attacked cities in this way from the very beginning of the Iran–Iraq war, carrying out bombing raids, using hydrogen cyanide, on the Kurdish city of Halabjah that left 5,000 dead and more than 7,000 seriously injured in March 1988.[25]

Tension is the inevitable result of such trends. The development of non-lethal weapons is unlikely to challenge this, being more likely to rephrase the debate than solve it. And as the preceding reference to US and UK approaches to thermobaric weapons suggests, it is probable that the reconciliation of social values and warfighting capabilities by multinational coalitions will remain difficult. Moreover, the employment of effective weaponry using flame and thermobaric munitions is only one facet of a wider tension between contemporary values, militaries and warfighting; other aspects are reflected in current recruitment and retention problems.

Contemporary discussion of the moral challenges of urban operations occurs in a vacuum. Significantly, one of the most insightful discussions of morality in the urban environment is to be found in an article on the sustained discussion of morality of war shown by the film *Saving Private Ryan*.[26] The author, William Prior, identifies four moral or ethical frameworks within the film that may be applied to urban operations: those of the soldier as an individual, as a member of a small combat unit, as a member of a specific state and from the universal perspective as one moral agent among many. Prior contrasts the morality of war with the morality of decency; he concludes that the two moralities are 'deeply and irreconcilably incompatible'.

Reconciling the Irreconcilable

Although many of the analytical problems of urban operations are being addressed, reconciling the moral challenges of fighting in cities with the known realities remains difficult. Targeting for (allied) casualty avoidance and minimal collateral damage is

now combined with the proclaimed defence of liberal or humanitarian values, US forcefulness in defending its perceived national interests, and the development of thermobaric weapons. As a result, policy development for urban operations is noticeably reactive and disjointed. Indeed, policy incoherence could yet be a decisive factor because

> Neither ethics nor law … can answer all the questions that may arise on 21st-century battlefields. Very often policy addresses the many gray areas that ethics and law do not necessarily enlighten, let alone resolve. Policy is critical because even where a particular course of action is technically moral and legal, there remains the important issue of perceptions. Perceptions can materially affect the public support that military operations conducted by democracies require.[27]

Several significant indicators emerge from the ensuing incoherence. For a professional military force, success in the notoriously costly and violent environment of urban operations is ultimately dependent on its ability (and reputation) to conduct simultaneous operations, ranging from public safety to combat, aggressively and persistently. At the same time, socio-political trends emphasise the value of humanitarian intervention, the virtues of democracy and the necessity for reconstruction. Nonetheless civilians invariably bear the brunt of any conflict. As a result, two of the fundamental lessons underpinning this book are reconfirmed. First, ignoring collateral damage means that overwhelming firepower can make up for policy, doctrinal, organisational and tactical deficiencies in the short term. As IDF operations in Beirut in 1982 and Russian operations against Grozny in the 1990s showed, heavy firepower can minimise own-casualties and maintain an adequate operational tempo. Linked to this is the second principle, which is that immediate tactical advantage usually accrues to the side with less concern for the safety of non-combatants. These lessons reflect both what is known of urban operations and the failure of current policies. This suggests that liberal democracies have yet to reconcile the restrictive legal and moral framework of contemporary coalition operations with the realities of operations. The two appear irreconcilable at present.

Future urban operations will force liberal democracies to confront their own values because civilians will be used to shape the city battlespace. This will be especially noticeable in the chronic low-level conflicts driven by cycles of confrontation and reprisal in which civilian casualties are high relative to combatants. As the current conflict between Israel and Palestine makes clear, 'technology will count for less, and large, youthful and motivated populations for more'.[28] Linked to this is the political need to reconcile the reality of dismounted close action in cities with the desire for negligible casualties. Victory is almost assured for any adversary still standing after killing a critical number of coalition forces, for the West's enemies are well aware that coalitions must achieve success relatively quickly and with minimal casualties. The West's response will provide evidence of the way in which power is to be exercised in the twenty-first century.

Notes

1. Obscuration is increased by the fact that few of today's politicians have personal military experience. That this is not the case in Israel deserves investigation. An earlier version of this chapter was published as 'The Intractable Nature of Urban Operations', *Civil Wars*, 4, 2 (2001), pp. 99–120.
2. A. Lieven, 'The World Turned Upside Down', *Armed Forces Journal International* (August 1998), pp. 40–3.
3. See I. Partridge, 'Modifying the Abrams Tank for Fighting in Urban Areas', *Armor* (July–August 2001), pp. 19–24.
4. *British Notes on Street Fighting* (undated; probably 1939 though published in 1943) (www.cascom.army.mil/multi/mout).
5. For Belgian troops in Kismayo, for example, see A. de Waal, *Famine Crimes: Politics and the Disaster Relief Industry in Africa* (Oxford: James Currey and Indiana University Press, 1997), p. 186. Compare *Dishonoured Legacy: The Lessons of the Somalia Affair*, report of the Commission of Inquiry into the Deployment of Canadian Forces to Somalia (Ottawa, Canada: Minister of Public Works and Government Services, 1997).
6. The presence of toxic chemicals in water supplies during operations may seem a civilian problem but the potential for litigation inherent in discretionary operations suggests otherwise. The lawsuits brought against the MoD in 2001 by British paratroopers contracting malaria in Sierra Leone emphasise the continuing importance of 'duty of care' considerations. Information about the spatial parameters of cities (their populations, physical organisation and activities) is

a fundamental theme in urban and security research but there are no coherent programmes addressing the topic across government departments in either the USA or UK.

7. Personal communications from S. Marvin and S. Graham, 28 May 2003.
8. T. Timothy, 'The Battle of Grozny: Deadly Classroom for Urban Combat', *Parameters* (Summer 1999), p. 93.
9. Compare S. Sassen, *The Global City: New York, London, Tokyo* (Princeton, NJ: Princeton University Press, 1991); P. Knox and P. Taylor (eds), *World Cities in a World-system* (Cambridge: Cambridge University Press, 1995).
10. World Bank, *World Development Report 1999/2000* (New York: World Bank, 1999), p. 127.
11. *British Defence Doctrine*, 1st edn (London: MOD CS (M)G, 1996), p. 3-6.
12. A. Roberts, 'NATO's "Humanitarian War" over Kosovo', *Survival*, 41, 3 (1999), pp. 102–23. Contrast Dunlap's argument that 'While civilians should not be targeted, a new paradigm for noncombatancy that allows the destruction of certain property currently protected by international law but not absolutely indispensable to civilian survival may well help shorten conflict and effect necessary societal change.' C. Dunlap, 'The End of Innocence: Rethinking Noncombatancy in the Post-Kosovo Era', *Strategic Review*, 28, 3 (2000), p. 9.
13. Compare S. Obenhaus, 'The Highway to Basra and the Ethics of Pursuit', *Military Review* (March–April 2000) (www-cgsc.army.mil /milrev/English/MarApr00).
14. See Jary and Carbuncle, 'In the Jungle of the Cities: Operations in Built up Areas', *British Army Review*, 121 (1999), pp. 61–8. Allied forces used flame-throwing tanks ('crocodiles') against German defenders in the fortified areas of cities such as Brest. Light anti-tank weapons were used by both British and German forces as anti-personnel flame throwers to clear buildings in 1945.
15. During street fighting in Germany in 1945, British commanders noted that although 'The immediate effect of "flame warfare" … was no surprise … the speed with which the enemy reacted was.' Their recommendation was 'use flame wherever possible'. Quoted in Army Field Manual Vol. IV, *Operations in Special Environments, Part 5: Operations in Built-up Areas (OBUA)* (1998), pp. 3-2–3.
16. Details are to be found in T. Gander (ed.), *Jane's Infantry Weapons 2000–2001* (London: Jane's, 2001), pp. 275–6; D. Huber, 'Fuel-air Explosives Mature', *Armor*, 110, 6 (2001), pp. 14–17. Huber notes that vacuum bombs proliferate in many forms.
17. See T. Thomas and L. Grau, 'Russian Lessons Learned from the Battles for Grozny', *Marine Corps Gazette*, 84 (2000), pp. 45–8; L. Grau, 'A "Crushing" Victory: Fuel-air Explosives and Grozny

2000', *Marine Corps Gazette* (August 2000), pp. 30–3. See also T. Leaf, 'Thermobaric Weapons: A Weapon of Choice for Urban Warfare', Marine Corps Study Group (call.army.mil/call/spc_prod/mout/docs/thermodoc); 'British army seeks bunker-buster', *Jane's Defence Weekly*, 17 January 2001.

18. Eleven of the weapons, originally developed in the late 1950s to clear helicopter-landing zones, were dropped on Iraqi troop positions in the Gulf War as part of psychological operations missions.
19. K. Burger and A. Koch, 'Afghanistan: the key lessons', *Jane's Defence Weekly*, 37, 1 (2002), pp. 20–3.
20. 'Britain works on grenade that goes through walls', *Daily Telegraph*, 5 January 2001.
21. *1981 United Nations Convention on Prohibitions or Restrictions on the use of Certain Conventional Weapons that may be deemed excessively Injurious, including Amended Protocol II* (May 1996).
22. The British-based campaign Landmine Action accuses the UK government of developing controversial alternatives to conventional mines, including lasers, microwaves and wide area sensors linked to an unattended system or to an autonomous direct-fire system.
23. See S. Edwards, *Mars Unmasked: The Changing Face of Military Operations* (Santa Monica, CA: RAND, 2000).
24. And culturally specific practices are presumed into universal doctrine. See G. Best, *War and Law since 1945* (Oxford: Clarendon Press, 1994).
25. S. Taheri Shemirani, 'The War of the Cities', in F. Rajaee (ed.), *The Iran–Iraq War: The Politics of Aggression* (Gainesville, FL: University Press of Florida, 1993), pp. 32–40.
26. W. Prior, '"We aren't here to do the decent thing": *Saving Private Ryan* and the Morality of War', *Parameters*, (Winter 2000), pp. 138–45. See also E. Krauss and M. Lacey, 'Utilitarian vs. Humanitarian: The Battle Over the Law of War', *Parameters* (Summer 2002), pp. 73–85.
27. C. Dunlap, 'Technology: Recomplicating Moral Life for the Nation's Defenders', *Parameters* (Autumn 1999), p. 24.
28. *Global Trends 2015*, para. 40. And the stakes tend to be high in such conflicts. As early as 2001, for example, many Israelis were reported as having abandoned thoughts of negotiating with Palestinians because the second intifada was seen as a threat to the existence of Israel. See 'Israelis close ranks behind government line on peace', *Financial Times*, 24 March 2001. Meanwhile, young Palestinian fighters, disillusioned with Arafat's inept management and corrupt administration, are incensed by what the international community has described as Israel's 'excessive use of force', hence the street language of liberation and martyrdom and the difficulties the IDF faces in preventing their activities.

10 The Logic of Urban Operations

The most important reason for examining urban operations is that they have the potential to become a critical security issue in the twenty-first century. Increasing urbanisation, demographic trends, globalisation and the emergence of powerful non-state adversaries suggest that cities will become a politically significant area in the future battlespace. Key cities are used by global and political capital as base points in the spatial organisation of production and markets; they are valuable, desirable and exploitable. Cities attract the disaffected, criminals and extremists, and they are often linked to the demographic pressures fuelling expansionist policies. There is no reason why this should change. While such trends are unlikely to escalate into serious international war, they are likely to result in prolonged low-level conflicts involving subversion, insurgency, terrorism, proxy and guerrilla operations, the impact of which is enhanced by cities. In consequence Western expeditionary forces will be forced to engage in cities whether they want to or not. Given the historically proven costs of most urban operations, the critical issue confronting the Western security community is whether operations can be made effective, efficient and relatively casualty free. The answer is that they cannot.

It is possible that economic targeting and information operations, perhaps involving subtle forms of exploitation, denial and punishment, will replace more conventional forms of war. This

could result from the lucrative potential of globalisation or from the fact that many contemporary wars are intended to produce financial profit rather than territorial acquisition. Yet it is unlikely. Realistic threats always require aggressive combat capabilities – it may be the only thing adversaries respect. In other words, the West will still have to face the fact that operations in cities are at best manpower intensive and at worst brutal, regardless of the promotion of liberal values or humanitarian war, or, indeed, the sophistication of the technologies available. And urban war remains the prototypical war, with street fighting continuing at a state that would be recognisable by the great-grandfathers of today's soldiers. Effective urban war depends on combined-arms teams, but infantry remains the critical element, and the pre-modern nature of close combat ensures that future infantry capabilities will remain based, literally and metaphorically, on the philosophy that 'What I find, I can kill.'[1] Cities make explicit the fact that neither globalisation, political contingencies, liberal democracy nor technological advances have changed the essential nature of military force or the purpose of its application.

An Urban Operations Hypothesis

The operations referred to in this book show that the characteristics and tactical constraints of urban operations have remained remarkably consistent over the past 60 years. They emphasise that cities have a critical effect on the military activities taking place within them, influencing the conduct of operations to a greater extent than any other type of terrain. The most important reasons for this include the physical nature of man-made terrain, the tactical and operational limitations of approaches designed for open areas, the pre-modern nature of close combat and the presence of non-combatants. As a result, cities represent the most complex and challenging environment in which military actions occur.

Yet urban operations have never been treated as a discrete or special class of military activity; they rarely receive dedicated attention. If anything they have been consistently regarded either as something that any trained or professional force can deal with or, in the case of war, as so destructive as to be avoided

at all costs. Indeed, urban operations are frequently regarded as the concern of military history rather than defence or security studies, and as a matter of tactics rather than strategy. In consequence, the strategic context of urban operations is neglected even though the political and financial status of the mega-cities in which they may take place is acknowledged. It is significant that, although coalition forces got to within 60 miles of Baghdad in 1991, the 1990s did not see sustained or systematic attention to the military–strategic implications of cities. If anything, the knowledge that urban operations are best avoided effectively sanctioned the belief that they could be avoided or, at worst, treated as a primarily tactical challenge. As a result there is no urban paradigm that can be applied to military operations. There is no coherent theory that can be based on principles independent of specific operations. Nevertheless, a hypothesis or explanation of why the characteristics and constraints of urban environments consistently affect military operations in the way that they do is now possible.

The explanation of urban operations given in this book is based on the conviction that a coherent set of facts and variables is identifiable, and that it provides insight into the function and purpose of military force in an urbanising world. This suggests that an urban field is identifiable, and that a set of relationships between positions characterised by their own logic and practices can be established. A strategic logic – a 'grammar' in Clausewitz's writing – of urban war is increasingly evident (though this should not be understood in the sense of precise formulae). The assumptions behind the logic include the following:

- Warfighting capabilities underpin all effective urban operations, including those of peacekeeping. They are necessary because cities are volatile and often require a range of operations to be performed, sequentially or simultaneously, during a single mission. As a result, urban operations place a premium on strong transitional and professional skills.
- City fighting is always difficult, destructive and manpower intensive, and the terrain magnifies and intensifies every problem and vulnerability.
- Warfighting usually results in close combat in which a soldier's experience, training, cunning and motivation are more valuable

than advanced technology or innovative doctrine. Indeed, 'the greater the determination of the enemy, the greater the need for close combat'.[2] Such war marks the regression of industrialised societies to pre-industrial styles of war.

- War is a clash of wills, but the best way of defeating an enemy remains killing him.
- Belligerents target civilians. This is either because they are being used as shields by the enemy, or because of ill discipline, the desire for retribution or punishment, deterrence, as a means to a political or tactical end, or because control is a central element in a warfighting strategy.[3]
- Military requirements usually mean that the population of a city must be controlled in some way. This is notably so when insurgency or terrorism is involved.
- Suffering and brutality are part of the logic of war – past, present and future. In consequence, urban war and humanitarian war are irreconcilable. It is desirable to lessen suffering but it is not possible to make war and peace at the same time.

These assumptions are now distasteful to Western societies though they would have been self-evident to commentators such as Clausewitz and Trinquier (who was General Massu's assistant in Algiers). It may be argued that extrapolating from events in Algiers or Grozny to the general case of future operations involving liberal democracies such as the USA or the UK is unjustifiable; that all wars are different. Nevertheless the assumptions are identifiable in a range of operations across the decades, including those involving liberal democracies. Indeed, their continuing validity is confirmed by recent operations, which make explicit the tension between liberal values and what we know of war. For operations in Sierra Leone, Iraq and Congo during 2002–03 support the continuing relevance of Clausewitz's observation that war 'is an act of violence … Violence … is therefore the means.' This in turn supports the continuing relevance of Trinquier's belief that the 'basic principles of traditional warfare retain all their validity in *modern warfare*'.[4]

The great value of such principles is that they are proven by experience across a range of operations and decades, rather than simply the most recent war. They are not present in every operation, but they represent archetypical aspects of operations. For

unlike the tactics associated with peacekeeping and humanitarian relief, the aggressive and survivalist tactics underpinning urban operations have evolved reactively and pragmatically, rather than as a result of conceptual, doctrinal, technological or political developments. This is not surprising – as Trinquier commented, '*the military art is simply and completely one of action*'.[5] Even so, the fact remains that cities and the urban battlespace are not fully understood, and neither have been fully integrated into doctrinal or force development. Much is known about the tactical problems (though tactical guidance needs to evolve) but little is understood of cities' strategic and operational potential.[6] The links between military operations, cities and the wider world are complex and diverse, not least because cities are part of a network of settlements, power and socio-economic structures. Cities result from a complex web of physical and human features and relationships that change over time, so determining their dynamics represents a significant challenge for any commander wishing to coerce, deter or manage rather than destroy. Additionally, in the future, cities will be overlaid with a battlespace framework that is multidimensional and less linear than in the past.

Rebalancing Tactics and Strategy

Developing a coherent strategic understanding of urban operations requires the West to engage with alternative and ambivalent modernities. It requires the reconciliation of contradictory and stressful relations, such as those existing between the security imperatives of coercion, warfighting and destruction on the one hand, and humanitarian relief, globalisation and technological development on the other. And it needs the imagination to look beyond current scenarios and interests. This suggests that urban operations needs to broaden its focus to facilitate the necessary adjustment. Although analysis must remain based on the methodological logic of military operations, an expanded critical perspective is also necessary.

There are a number of ways in which this can be facilitated. The humanitarian imperative is one possible analytical aid, as are those of liberalisation or conflict resolution, but all come value-laden. A less subjective approach can be derived from the

study of what happens when social and political cohesion is disrupted, and the usual processes of communication and distribution fail as a result of man-made disasters. This approach offers more because it specifically identifies patterns of behaviour and management relevant to the processes of disaster, recovery and transition that policy must deal with. It is especially valuable because disaster response is invariably caught up in paradoxes that signal the limitations of existing public policies and imply a need to find alternatives addressing the broader context of decision making.

A contextual understanding

War is a more complex, pervasive and prolonged phenomenon than disaster, but both involve crises, destruction, industrial disasters, fires and explosions.[7] There are naturally limitations to the transferability of disaster-related material to war. The course of recovery from war-caused industrial disaster differs from that in peacetime; in war, facilities may continue to operate in an impaired state for some time. War can also add new dimensions, such as the systematic and repeated destruction of facilities during periods when usual emergency responses are not possible. Even so, the linkage deserves consideration. One reason is that it is possible that the targeting of industrial facilities and their associated populations will increase in future. All cities, whether in the developed or developing world, have petrol, gas and chemicals in abundance. Storage tanks of natural gas, chlorine, ammonia, industrial explosives and fertiliser could be used as a poor man's weapon of mass destruction – the strategic logic for such attacks is strong. Mass casualties would result and governmental legitimacy could be undermined if security against such attacks repeatedly failed. And it is dangerous to assume that war will occur only in developing countries.[8] A second reason is that dealing with the hazards associated with industrial sites, gas and electricity requires specialist knowledge, that is, forethought. Third, industrial disaster is typical of many post-conflict scenarios. Kuwait in 1992 illustrates the potential.[9] The amount of structural damage in Kuwait turned out to be less than was originally feared, but the entire country was without water, electricity and sanitation for a period. Burning oil wells created

immense pollution (nearly 600 were on fire by the end of the war), and a huge arsenal of mines, munitions and unexploded ordinance existed.

An informative study of the linkages between war, industrial disaster, community destruction and reconstruction during and after war is to be found in Amirahmadi's account of the impact of the Iran–Iraq war of 1980–88.[10] This was the longest conventional war in the twentieth century and is of particular relevance because it included a 'war on cities' that saw Iraq's use of technologically advanced artillery to target distant industrial plants, and missile attacks to depopulate settlements and strangle Iran's economy. Oil installations were a primary target. At the main Iranian loading terminal on Kharg Island, for example, 21 of the 39 crude-oil storage tanks were completely destroyed by fires, spilling up to 12 million barrels. Iraq also used chemical and biological weapons to kill civilians in urban areas; the Iraqi Kurdish town of Halabchech was destroyed by chemical bombardment so as to prevent it falling into the hands of Iranian troops. Damage to Iranian cities was significant, with up to six reportedly levelled and many others seriously damaged; Korramshahr, whose 1980 population was 300,000, became an almost total ruin.

Relevant peacetime industrial disasters include those involving the sudden airborne release of toxic chemicals in densely populated cities (Western strategies for large-scale evacuation are reportedly in the process of development but have yet to be tested). An example of this occurred at a pesticide factory owned by the American-owned Union Carbide Corporation in Bhopal, India, in 1984. Leaked gases were trapped by night-time temperature inversion in a shallow bubble that blanketed the city within five miles of the factory. By the next morning 2,000 were dead and 300,000 injured. Nearly 400,000 people fled the city in the days that followed, with another uncontrolled flight of about 200,000 occurring the following week. The effects were geographically restricted but the disaster involved government agencies in India and Union Carbide as an international actor.[11] In contrast, the 1986 nuclear reactor explosion and fire in Chernobyl, Ukraine, affected large sectors of the population in Europe and Asia, and the world's nuclear power industry. The Chernobyl disaster also emphasised that government decision making must

be factored into urban operations. It showed that the political and legal responses of governments to disasters are remarkably similar. Most try to conceal the extent of a disaster and then deny its magnitude or seriousness. Concern to prevent public panic and to protect the industry concerned is common, as is confusion about responsibilities. Indeed, the political management of most crises is hesitant and weak, and there is little reason to believe it would be different in war. Advice from the war correspondent Martha Gellhorn remains apposite: 'never believe governments, not any of them, not a word they say'.

There are naturally limits to the applicability of disaster management to urban war but contextualising operations in this way can facilitate a more comprehensive understanding of how cities work and respond to military operations within them. It rebalances the current tactical focus. It emphasises the multiple linkages between military forces, governments, the physical environment, civilians and contingencies. It suggests that natural, technological and military threats require overlapping or mutually supportive arrangements. Above all it reminds us that urbanisation already provides a critical interactive context for operations.

A wider perspective also requires new concepts and new approaches. Traditional distinctions may need to be questioned, as may conventional responses. Although many aspects of urban war remain relatively unchanged, simply overlaying existing approaches with new policies, tactics or technology will probably not be sufficient to deal with future threats. Tactical approaches, for example, cannot provide all the answers. Indeed, as Chapter 5 notes, Dov Tamari has argued that 'the tactical field of knowledge' has little to offer contemporary wars.[12] New attack helicopter tactics and improved technology would, in his judgement, still fail to provide an adequate solution. He continues,

> Even the concept – based on solid, successful experience – of hitting targets located in built-up areas by means of precision-guided munitions, in the manner of a surgeon's scalpel, would not advance solutions to or resolve the problems associate with operations in urban environments in the context of limited-scale, low intensity wars. Instead, we must develop new concepts in the operational and strategic fields.

There are many ways in which this can be developed. Tamari suggests they include developing new means of power projection, separation and isolation, and new ways of winning the support of sympathetic or neutral populations. Other possibilities are proposed by Russell Glenn, who approaches the problem in terms of city characteristics such as density, on the basis that the high density of urban areas affects every level of operations.[13] At the tactical level mental and physical exhaustion is exacerbated by the high noise levels reflecting off hard surfaces. More infrastructure, people and activity means situations change rapidly so more decisions are needed, but the time available for decisions is contracted. Density's cumulative negative effects can also create a scenario of sensory and capability overload. Activities at the operational and strategic levels are complicated because a single area can soak up manpower and other resources. Density, like the linked notions of tempo and fragmentation, thus represents a way of understanding the dynamics of operations. For the result of density, vibration and increased tempo is magnification; everything becomes intense, expensive and noisy.

Concepts such as density and vibration, which illustrate the texture of operations, may be usefully supplemented by territoriality, which focuses on its objective. Territoriality (introduced in Chapter 8) concerns both ground and control, both of which shape operations. Territorial acquisition and the desire for control continue to prompt war, especially in the face of governmental fragmentation or civil war – and almost all wars are now civil wars. Indeed, Michael Humphrey has argued that 'With the loss of an integrated and governed national space urban space becomes the most important political domain for command. Urban warfare becomes the principal means of increasing political power based on territorial control.'[14] There will be regional and, perhaps, cultural differences. The patterns of urbanisation in the Balkans (to which Humphrey refers) are different from those in Congo or the Middle East; the understanding of territoriality may be subtly different too. But territoriality will no doubt continue to be a consideration or objective when a political elite or government (perhaps in a multinational coalition) has an interest in a city, if the region containing it is rich, or if it is a world or hub city representing an economic nodal point. Even so, not all actors need territory. Al-Ittihad, Somalia's foremost radical group (and

labelled by Washington as a terrorist movement) lost much of its vulnerability when it abandoned its efforts to retain a formal structure and physically control territory. And the regimes running the shadow states referred to in Chapter 1 draw authority from their ability to control markets and resources, rather than territory; they exploit their dependency on foreign firms, mercenaries, creditors and aid organisations. The internet and increased mobility make this easier. As Rosecrance has noted, information technology means that a radical economic and political change has occurred because foreign direct investment is now secured abroad. Indeed, he believes territorial expansion is no longer essential: 'developing countries which still produce goods derived from land, continue to covet territory. But where the producers of land no longer determine market and power relationships, a new form of state is born: the virtual nation, a nation based on mobile capital, labour and information.'[15] Despite this, territoriality remains an important notion for security and conflict analysis because conflict is still about asserting control over specific geographical areas in order to expand a dominant group's space or restrict that of an adversary. It prompted the use of communal terror to remap Vukovar, Sarajevo and Mostar during the Balkan wars; it underpins the IDF's deliberate destruction of Palestinian houses, infrastructure and cultural and administrative facilities during Operation Defensive Shield; and it drove the US seizure of Iraq's key cities and symbols of regime power in Operation Iraqi Freedom.[16] Territoriality lies at the heart of operations in cities.

Future Operations

The potential for fundamental or dramatic change in the coming decade exists yet it seems unlikely. It is probably misleading, not to say arrogant, to assume that the world has entered a new period of uncertainty and rapid change, with more diverse threats; existing problems associated with the interface between different cultures, globalisation and localisation, and terrorism are unlikely to disappear. Evolutionary or adaptive processes in which operations retain many of the characteristics of the early years of the century are more probable, with the transitional

phases displaying recognisable forms of regularity or stability. An expansion of policing or internal security tasks is one future possibility, especially if large, youthful and motivated populations prove characteristic of future conflicts, or if terrorism remains the West's primary security concern. Significantly, Amnesty International's annual report for 2003 observes that the emphasis placed on counterterrorism after 2001 has already resulted in the erosion of the basic principles of international humanitarian law; worldwide repression and detention without trial means that no country is excluded from the 311-page report. Uniforms, formal organisations or conventional codes of conduct may not identify many future adversaries. An alternative possibility is that the future battlefield will consist of decaying buildings inhabited by the elderly, women, children or ethnic minorities. In such circumstances warfighting skills may require tempering, not least because operational solutions will require more than tactical success. Humanitarian tasks are unlikely to become operational objectives, but they could yet become a catalyst for warfighting, just as advances in non-combatant control or technological developments could conceivably lead to enhanced domination capabilities. It is important to think about the unique challenges that future war may pose in the cityscapes of the twenty-first century, though the possibility of conventional adversaries continuing to fight conventional – or irregular – wars should not be dismissed out of hand.

Evolution is the dominant mode of change, but the balance or expression of even recognisable factors will be different. New alliances and rivalries will emerge. Objectives will be redefined or reprioritised. Territory, for example, is likely to remain an important factor, but adversaries may not operate from traditional geographical units so territoriality may need to be redefined. Security may change as its resources become joint or commercialised in a way currently unimagined. And escalation cannot be dismissed, not least because the type of tactics an adversary may evolve in response to the West's current operations cannot be predicted. Nor can major discontinuities with the potential to change fundamentally strategic circumstances be foreseen. This represents an intellectual challenge because the political requirements of contemporary operations have created a terminology that by using words such as precision, digitalisation and

transformation implies a degree of control or management that does not exist. Current categorisation reinforces the false sense of security that operations will not escalate in an unpredictable or bizarre fashion. In fact, distinctions between the various phases of urban operations remain imprecise; simultaneous transitional operations are difficult to conceptualise; and there is no method or doctrine for precision urban combat.

Factors affecting future operations

Formative factors shaping the resultant operations are, in the medium term at least, likely to include the fading fear of general war, the limited resources available for defence or aggrandisement in the industrialised world, the expectation of minimal allied casualties, new technologies and the fact that most operations are carried out with partners or allies and involve a broad range of operations. Of the factors driving change, political issues are probably the most important; discontinuities only represent breakpoints when they are translated into political terms. Political sanction will also be needed when new technology provides a military opportunity, as will be evident if space proves as militarily exploitable as the Bush administration believes. The tight linkage between political and technological factors is most evident when the extent to which the future of conventional urban operations depends on the USA is considered.

The USA has staked much on technological 'transformation' (based on the exploitation of digital and space technology) as a means to move from traditional platform warfare to a network-centric way of fighting, thus fighting on its own terms and avoiding heavy casualties. Heavy forces designed for overlapping wars on the scale of 1991's Operation Desert Storm are to be transformed into light, agile forces. According to the 2001 Quadrennial Defense Review, transformation's objectives include projecting and sustaining power in distant theatres, denying enemies sanctuary and using information technology to link US forces so they can fight jointly. If such aspirations can be made reality then urban war may be fought very differently in 2025. The UK and France are the only two European countries currently capable of taking the lead in urban peacekeeping, but neither wishes to develop or maintain the capabilities needed to

take a leading role in warfighting. Thus it appears that the leadership of any warfighting coalition will remain with the USA (assuming it is willing) by virtue of its resources and specific role in international politics.

Technology

Technology, like war itself, may introduce or accelerate change, but the extent to which it will shape future operations is contested. Most visions of urban war in the coming decades are technologically based and distinctly futuristic. Nanotechnology and precision systems will, it is argued, either revolutionise a soldier's operations or at least radically improve his lot. Predator imagery is to be fused on a joint surveillance target attack radar system (JSTARS) platform, while munitions such as the joint direct attack missile (JDAM) will transit urban canyons; robotics and hunter-killer battlefield unmanned aerial vehicles (UAVs) are to mitigate casualties and enhance lethality. Technological solutions to urban operations' challenges are undeniably highly desirable, and new technologies in areas such as intelligence, surveillance, target acquisition and reconnaissance (ISR), precision munitions, and non-lethal weapons undoubtedly suggest exciting possibilities. The American faith in technology's enhancing virtues and leverage potential is widely shared – American technological sophistication is one of the attractions of the USA as an ally. The changes associated with President Bush's election pledge to give the Pentagon the opportunity to 'skip a generation' in military technology could conceivably affect the course of future urban warfighting. Or it could merely pander to the vision of war as the USA would like to fight it – 'controllable, quick, clean, and with victory assured'.[17]

Aerospace power, as an exemplar of technological development, is often thought capable of delivering such war. Its attractions are well documented. It can project force rapidly and flexibly, and its precision capabilities can reduce casualties and collateral damage. The use of new strike and navigation technologies, and the fusion of aerospace-ground sensor information could, theoretically, combine with innovative operational concepts to produce highly integrated urban aerospace–ground operations.[18] Its limitations are, however, equally well known, and of these the most relevant is that only land power can take or hold cities. In

addition, the effectiveness of airpower in urban operations has varied so much over the years that no general trends are evident.[19] This suggests that its shaping influence on urban operations is likely to be limited.

There is as yet no firm evidence that technological developments will fundamentally reshape urban operations – it is even possible that new technology actually reduces military effectiveness.[20] Seven recurring technology-related themes, identifiable in the contemporary debate, support this generalisation:

- Urban terrain negates many technological advantages. Buildings hinder the situational awareness needed for safe manoeuvring, turn global positioning systems into unreliable navigational aids and make communications difficult.
- Low or existing technology presents a continuing threat to the legacy forces of today and the projected digitised force of 2010. Shoulder-fired, surface-to-air weapons remain a threat to aircraft, and a resourceful enemy can counter the most sophisticated weapons.
- Too many existing problems are unsolved. Back blast, for example, is still a problem when many weapons are fired in enclosed spaces.
- Future operational requirements are unknown. It is not clear what command, control, communications, computers and intelligence (C4I) advances in information control or threat detection are needed to optimise forces for a range of operations covering COIN to war. Some quick-win options are identifiable, among them building entry capabilities and camouflage, but these will not reshape operations.
- Technological development involves opportunity costs, equipment priorities and trade-offs. The case of specialised communications and obstacle-crossing capabilities provides a simple illustration of this.
- There is a disconnection between the time lines guiding government procurement programmes and those guiding industry. This makes influencing equipment programmes difficult.
- Effective enabling technologies (such as mines, flame and novel explosives) already exist, but law and policy guidance often prevent their deployment.

Technology is consequently an enabler rather than sufficient in itself. It brings both opportunities and vulnerabilities. In the long term it may permit the development of new approaches to urban operations, but in the medium term it is of less importance than training, experience, doctrine and organisation. This suggests that, despite the rhetoric of traditionalists, urban operations should no longer be thought of as a matter for generalists. In fact most units already specialise in some operational area. Organisationally this could mean that cadres of urban specialists should be developed, or that small, distributed units should replace large formations. Civilian contractors, mercenaries and private military or security companies may also have a potential role to play; their use would represent considerable savings in a typical peacekeeping operation.

Training

Of the variables, training is probably the most important for four reasons. First, experience may be misleading. French paratroopers went into Algiers as an experienced fighting force but were unprepared for urban operations. Because they had no doctrine to guide them they initially relied on their experience from rural Indochina, which was misleading. Second, inappropriate training may be equally deceptive; training to establish feeding stations did not prepare US soldiers for patrolling Mogadishu. Third, as British forces discovered in Northern Ireland, learning on the job, even with the benefit of warfighting experience, takes too long. And fourth, as the US Marine Corps's Urban Warrior experiment showed, inexperienced infantry attacking an organised defence have almost no chance of success.

The benefits of good training are well documented. It improves capabilities while reducing friendly casualties and collateral damage, and it can offset situational blindness and aid recognition of key terrain and weapons effects. The cadre of regular Israeli units that received tactical training before the 1982 invasion of Lebanon, for example, performed better in Beirut than did reservists, who did not receive it. Similarly, British forces in Northern Ireland soon learnt that proper preparation and training were essential. Despite this, training is rarely a priority. The reasons are not hard to find. Urban training requires time and practice; weeks are needed to achieve basic proficiency in

assault, entry, clearing, navigation and day and night patrolling; skills such as mouseholing and thinking in multidimensional terms must be regularly practised. There are other major considerations. What should be sacrificed to allow for more urban training? What will be the effect on other operations? Should training focus on sprawling industrialised cities, shanty towns or a Kabul? And good training facilities and exercises are expensive. The US Army centre at Fort Knox, Kentucky, which covers 53,000 acres (including 7,000 acres used for live firing), cost $15 million and has annual operating costs of about $800,000; the USMC operation Urban Warrior cost $5.5 million. It is also difficult to make training realistic. Zussman village at Fort Knox uses civilians, the sounds of planes, tanks and gunfire, and the smell of decomposing bodies, sewage and stagnant water, but the civilian presence is invariably small, lighting systems cannot replicate the light levels needed for training with night vision devices, and complexity is difficult to create on a large scale.[21] Western troops do not combine training with battle inoculation, or clear houses under a storm of live fire from machine guns. Environmental and health and safety regulations apply (especially in relation to live-fire training), and helicopters circling close to civilian buildings at night usually result in a public outcry. Unsurprisingly, most training focuses on the individual or small unit, to the neglect of combined-arms training incorporating rotary-wing transport and fire support, fixed-wing aircraft and ground fire support. Not surprisingly, there is a worldwide lack of facilities designed for company-size or larger unit exercises, and very few urban ranges have a live-fire option.[22]

Balancing variables

Appropriate training and relevant experience can tip the balance in operations, success in which will remain dependent on the type of mission involved, the quality of the adversary and the number of casualties and collateral damage political leaders are willing to risk. Technology may lighten a soldier's load and enhance his situational awareness, but it cannot provide the physical and mental toughness that training encourages. It cannot stop street fighting taking place in enclosed spaces and at close quarters. It cannot prevent targets appearing and disappearing quickly at

very short ranges. It has yet to dramatically reduce casualties. Not surprisingly, there is a major disconnect between much contemporary writing on the so-called Revolution in Military Affairs and the research of, for example, the US Marine Corps Warfighting Laboratory.[23] The professional consensus, meanwhile, is that urban operations are remarkably unchanged from earlier decades. Accounts describing both historical and contemporary war emphasise how slow operations are and how exhausting being under direct attack is. Most refer to noise, rubble, fear of snipers and the high incidence of mutilation.

Conclusions

The future city has had a powerful impact on popular culture, from Fritz Lang's *Metropolis* to Ridley Scott's *Blade Runner*, and visions of future operations range from Robert Heinlein's *Starship Troopers* to James Cameron's *Terminator II*. But precisely what operations will look like in 2025 is impossible to predict. That operations in 2003 are remarkably similar to those conducted in 1983 suggests that differences may be superficial rather than fundamental.

The extent to which political legacies from the twentieth century may subvert or accelerate change is impossible to judge though the immediate future is most probably more of the same. But the only thing that can be said with certainty about the future is that it will differ from the present. Any list of the most significant factors affecting operations and the international security environment in the coming decades is to some extent arbitrary.

However, such a list might include the following:

- At the beginning of the twenty-first century half of the world's population lives in areas classified as urban. This has strategic implications, not least because Asia and Africa are only just beginning their urban transition. The institutions and politics that served the relatively dispersed and stable rural populations of the twentieth century do not necessarily transfer well to cities, and new inequalities and conflicts are a frequent result.
- The dynamics of population growth, settlement patterns and uncontrolled migration may increase stress in regions subject to territorial disputes, ethnic rivalries or environmental scarcity.

- Divisions between the economic North and South, which offset the processes associated with globalisation and internationalisation, accentuate tensions.
- The West's increasing reliance on information technology results in new (often urban based) vulnerabilities and new dependencies. Criminal gangs, for example, are already co-operating more closely with international terrorists, and both exploit netcentric modes of organisation that make identification difficult.
- With the possible exception of the USA, the ability of Western states to act unilaterally in such a world is low. As a result, operations are usually conducted from within the political safety net of a multinational force.
- Multinational force packaging is based on coalitions of willing if disparate forces, and the capabilities and objectives of those involved tend to be unbalanced. Such forces also take longer to package and react. Political sensitivities inevitably intrude and there is little sign that forces capable of urban warfighting will develop complementary capabilities in the near future. Not surprisingly, the USA relies on its own proven forces and resources whenever possible.
- Coalition operations are typically discretionary, interventionist and oriented towards peacekeeping or (increasingly) counter-terrorism, regime change and reconstruction rather than war as such.

Reductionist analyses that treat operations as a purely military concern are therefore flawed. Strategies that acknowledge overlapping security threats and political objectives must be developed because the necessary broadening of understanding must take account of other goals. This could be critical if urban operations prove to be as characteristic of the 2020s as peacekeeping was of the 1990s.

It would be presumptuous to predict which of the many factors will be high on the policy agenda in 2025, but one compelling factor is clear: many political objectives cannot be achieved without controlling key cities for variable periods of time. Managing or responding to the resultant crises and regional disputes will call for a mix of economic, institutional and military measures, underpinned by warfighting capabilities. It will not be a matter of simply developing the right tactics and equipment because the

very fact that operations take place in cities will introduce a new set of variables. At the tactical level the combined use of trained all-arms groups co-ordinated with joint fire and ISR is likely to provide a useful building block for most scenarios. Some degree of role specialisation is probable. But urban operations also involve military and political constraints, and historical and cultural perceptions. Furthermore, a change in one of the elements underpinning a functionally important city could set in train a cascade of reflexive changes in others. Operations in a hub or world city could extend the notion of an enemy well beyond the parties immediately involved. And warfighting is always a possibility in such a world. Indeed, it is a probability in an overcrowded world with limited resources. That urban terrain has an intensifying effect on all military operations therefore remains of critical significance; urban war will always be difficult, casualty intensive and at odds with liberal norms and assumptions. There are no technological solutions to the known problems even though technology can undoubtedly enhance the value of good training, especially in relation to command and control. Combined, the themes of pre-modern conflict and new challenges make urban operations an archetype of contemporary conflict.

Ultimately, urban operations deserve attention because they are the most complex of all military operations and because they engage with key emergent issues and trends. Urban operations represent a hard security challenge while offering a powerful conceptual means for generating new insights into military operations in an urbanising world. They are a reminder that, when searching for the global roles and meaningful purposes that 'new war' articulates, we run the risk of paying insufficient attention to the unchanging nature of military force. Integrating the various aspects of urban operations is therefore important. For just as the Cold War placed security studies at the centre of the intellectual and political challenges confronting the West, so urbanisation and demographic change may mean that urban operations represent a critical issue in the twenty-first century. The West's ability to address these challenges effectively will depend to a large extent on the skill with which it understands the phenomenon of military operations within the broader context of security. This book is offered in the hope of initiating the development.

Notes

1. Director of Infantry, *Future Infantry … the route to 2020* (2000), p. 5.
2. Ibid., p. 3.
3. Contemporary casualty figures reinforce this explanation. In the First World War, 5 per cent of casualties were civilian; in the Second World War the number was 50 per cent; but by the 1990s the figure was 90 per cent. See S. Chesterman (ed.), *Civilians in War* (Boulder, CO: Lynne Rienner, 2001); C. McInnes, *Spectator-sport War: The West and Contemporary Conflict* (Boulder, CO: Lynne Rienner, 2002), p. 10.
4. R. Trinquier, *Modern Warfare: A French View of Counterinsurgency*, trans. D. Lee (London: Pall Mall Press, 1964), p. 22 (italics in original). Trinquier's concerns focused on the implications of terrorism and insurgencies, both of which are re-emerging as significant challenges. Trinquier is a controversial figure today. He argued that torture, for example, was a reality that rebels should anticipate; it was unexceptional and one of the risks of war. Nonetheless, as Glenn has noted, the West's adversaries may well apply his techniques. See R. Glenn, *'… We Band of Brothers': The Call for Joint Urban Operations Doctrine* (Santa Monica, CA: RAND, 1999), p. 42.
5. Trinquier, *Modern Warfare*, p. 26.
6. The need to understand the wider picture prompted the UN programme on hazards in mega-cities to employ interdisciplinary teams representing geography, urban studies, urban planning, anthropology, landscape architecture and development planning. Many tactical notions (of the best aggressive:defensive ratio, for example) are based on European models developed during the Cold War, whereas future wars will probably occur in the developing world. Similarly, the probable division between time and resources spent in rural as opposed to complex terrain in 2025 needs further research. Whether the split will be 30:70 or 70:30 is of concern to force development units now.
7. For the environmental, technological and social hazards of ten mega-cities (including Seoul) see J. Mitchell (ed.), *Crucibles of Hazard: Mega-cities and Disasters in Transition* (Tokyo: United Nations University, 1999). Peacetime hazards may produce effects comparable to military scenarios; that of the blast and fireball associated with phenomena such as BLEVE (boiling liquid expanding vapour explosion) is a case in point. Compare M. Masellis *et al.*, 'Fire Disaster in a Motorway Tunnel', *Annals of Burns and Fire Disasters*, 10, 4 (1997), pp. 233–40; M. Masellis and S. Gunn, *Management of Mass Burn Casualties and Fire Disaster* (Dordrecht: Kluwer, 1992).
8. Despite the current US focus on homeland security, the extent to which the hijackings of 11 September 2001 changed this perception

is questionable. Significantly, industrialised countries are not necessarily better prepared for disaster. Despite decades of planning and a highly sophisticated system of hazard management, the 1995 earthquake in the Kobe–Osaka region of Japan (Japan's second largest metropolitan area) killed more than 6,400 and destroyed large parts of the region; 240,000 people fled after fires burned out of control, buildings collapsed and emergency management procedures evaporated. Compare the Great Kanto earthquake of 1923, which killed more than 100,000 people in Tokyo and destroyed more than 700,000 buildings in a city of just over 2 million.

9. See J. McDonnell, 'Rebuilding Kuwait', *Military Review* (June 1993), pp. 51–61; I. McGill, 'British Forces: Kuwait in the Aftermath of the Gulf War', *British Army Review*, 100 (1992), pp. 73–83. Compare M. Lee, 'A Curious Void: Army Doctrine and Toxic Industrial Materials in the Urban Battlespace', unpublished dissertation, School of Advanced Military Studies, Fort Leavenworth, KS (2001). Most recent conflicts have resulted in localised and low-level pollution. See the report by the UN's environmental programme at www.postconflict.unep.ch.
10. H. Amirahmadi, 'Iranian Recovery from Industrial Devastation during the War with Iraq', in J. Mitchell (ed.), *The Long Road to Recovery: Community Responses to Industrial Disaster* (Tokyo: United Nations University Press, 1996), pp. 148–82. Ironically Amirahmadi laments that mainstream literature about industrial disasters hardly recognises the relevance of war. *The Long Road to Recovery* is the best introduction to industrial disasters and their effects. For photographic evidence of the impressive resilience of city populations after war see K. Margry, 'Battle for Cologne', *After the Battle*, 104 (1999), pp. 2–37.
11. For details see P. Shrivastava, *Bhopal: Anatomy of a Crisis*, 2nd edn (London: Paul Chapman, 1992). Union Carbide paid $470 million in compensation to 500,000 victims. An Indian extradition request for the company's former chief executive remains in place.
12. D. Tamari, 'Military Operations in Urban Environments: The Case of Lebanon, 1982', in M. Desch (ed.), *Soldiers in Cities: Military Operations on Urban Terrain* (Carlisle, PA: Strategic Studies Institute, US Army War College, 2001), pp. 49f.
13. R. Glenn, *Heavy Matter: Urban Operations' Density of Challenges* (Santa Monica, CA: RAND, 2000), p. 10, fig. 1; p. 2.
14. M. Humphrey, *The Politics of Atrocity and Reconciliation: From Terror to Trauma* (London: Routledge, 2002), p. 65.
15. R. Rosecrance, *The Rise of the Virtual State: Wealth and Power in the Coming Century* (New York: Perseus, 1999), p. 4.
16. For an analysis of Israel's strategy towards Palestinian territory see S. Graham, 'Lessons in Urbicide', *New Left Review*, 19 (January–February 2003), pp. 63–77. 'Urbicide' is the deliberate destruction of a city.

17. McInnes, *Spectator-sport War*, p. 136.
18. The results of a US project investigating this are presented in A. Vick *et al.*, *Aerospace Operations in Urban Environments: Exploring New Concepts* (RAND, 2000).
19. Ibid., p. 264.
20. During the battle of Hue in 1968, for example, Marine battalion commanders sought out bazookas because they were thought to be much better at shooting through walls than the advanced light anti-tank weapons of the day. Comparable searches would no doubt occur today.
21. R. Tiron, 'Army Training Site Brings to Life the Horrors of War', *National Defense* (July 2001), pp. 20–2. For the use of 'civilians on the battlefield' teams at the Combat Manoeuvre Training Center (CMTC), Hohenfels, Germany, see www.cmtc.7atc.army.mil. In an attempt to address the complexity issue, Urban Warrior used a disused nine-storey hospital with more than 1,500 rooms. See 'Urban Warrior: First Impressions', *Marine Corps Gazette* (June 1999), pp. 4–5. Simulation is increasingly used to solve training problems though it clearly cannot provide a substitute for experience. Thus simunitions, a training device from the Canadian firm Simunitions Ltd, was used in Urban Warrior. It is less expensive and safer than live firing but the instrumentation tends to be limited to video recording, basic targeting and some special effects (usually sound and explosives). See N. Brown *et al.*, 'War games', *Jane's Defence Weekly*, 14 November 2001, pp. 25–8. Details of US training facilities and exercises can be found in publications such as *Infantry, Marine Corps Gazette* and *Modern Simulation & Training*. Representative articles includes J. Karagosian, 'Street-fighting: The Rifle Platoon in MOUT', *Infantry*, 90, 6 (2000), pp. 23–30; R. Gangle, 'Training for Urban Operations in the 21st Century', *Marine Corps Gazette*, 85, 7 (2001), pp. 26–8. Compare the NATO facilities described in M. Hewish and R. Pengelley, 'Warfare in the Global City: The Demands of Modern Military Operations in Urban Terrain', *Jane's International Defence Review*, 6 (1998), pp. 32–43; K. Moseley, 'Building up the Will to Fight', *Soldier* (February 1999), p. 9; C. Schulze, 'Fighting in Built-up Areas [pt 2] German Army Style,' *Combat & Survival*, 13, 4 (2001), pp. 8–10.
22. See D. Rose, 'Close Air Support Ranges for the Urban Warrior', *Marines Corps Gazette*, 84, 5 (2000), pp. 69–71.
23. 'The RMA … is here', according to D. Goure. See 'Briefing: intelligence, surveillance and reconnaissance', *Jane's Defence Weekly*, 27 February 2002, pp. 24–7. Compare M. Libicki, *The Mesh and the Net: Speculation on Armed Conflict in a Time of Free Silicon*, McNair Papers 28 (1994) [www.ndu.edu/inss]; McInnes, *Spectator-sport War*, pp. 115–41.

Afterword

The analysis presented here has major implications for the West's preferred means of operations, which rely on the use of professional forces and technological resources to conduct discretionary and expeditionary war with air-delivered precision weapons from a distance. Four points deserve special emphasis:

A strategic logic or grammar is evident

- Successful urban operations depend on combined-arms teams and, increasingly, joint forces, but infantry remains the critical element. The nature of dismounted combat ensures that effectiveness depends on good non-commissioned officers (NCOs) and junior officers, relevant training, high morale and a readiness to take casualties.
- Technological developments and innovative doctrine count for less than training and experience; tactics evolve by trial and error, rather than radical reassessment.
- City fighting is difficult, manpower intensive and often cruel. The urban environment magnifies and intensifies every known tactical problem and vulnerability, and the incidence of brutality is high.

Urban operations challenge the Western way of war

- The urban environment has the potential to undermine the West's faith in technology's transformational potential, precision war and airpower's strategic or decisive capabilities.
- Operations cannot be made simultaneously militarily effective, efficient and casualty free. Operational effectiveness is the decisive variable.
- Minimising non-combatant casualties is not a meaningful operational objective, but liberal democracies are generally expected to avoid militarily unnecessary destruction. However, short-term advantage usually accrues to the side with least concern for non-collateral damage and non-combatant casualties.

Need for strategic coherence

- Operations engage with key emergent issues and trends. This is particularly significant when political goals include regime change or reconstruction.
- Military operations cannot solve deep-seated security problems or policy deficiencies; tactical success must be complemented by coherent political strategies. Urban operations cannot be isolated and must be related to wider policy objectives.
- Identifying the nature of the war concerned is important.

Policy outcomes

- Many political objectives cannot be achieved without controlling key cities for variable periods of time; an appropriate balance between persuasion, coercion, destruction and reconstruction must be identified. The aftermath of operations should not be neglected.
- Western governments need to take the moral high ground, but the legal and moral framework of coalition operations has yet to be reconciled with the realities of sustained urban war. The extent to which this is important will depend on the states and circumstances concerned, but the controversy surrounding Operation Iraqi Freedom suggests that disagreement could be sharply divisive. The implications of such tensions require analysis and assessment.

- There is a strategic vacuum in urban operations that needs to be filled or future operations will be marked by policy incoherence. The complexity and difficulty of military operations in cities may introduce further uncertainty into policy outcomes.

Urban operations thus present a unique set of challenges to policy makers and commanders. As this book shows, not only is the urban environment the most complex in which military operations take place, but operations are shaped by tensions resulting from the gap between the technical possibilities, vested interests, liberal norms and the realities of urban war. The book demonstrates that substantive questions of theoretical understanding and policy response are as important as tactical concerns.

Current trends suggest that what makes Western forces powerful in cities is the technology that gives them information, yet the extent to which the Western way of war would ensure success in future operations is uncertain. Technology offers promising ways to achieve innovative tactics or to accelerate change, but much depends on the type of war, and on the morale and experience of the troops concerned. For the inescapable fact remains that urban terrain negates the value of many sophisticated technologies. In other words, the West's technological superiority can facilitate success, but it cannot ensure it because its enemies need only to avoid defeat.

Appendix: Literature Sources

The relevant literature on urban operations comprises the historical narratives, tactical-level studies and lessons-learned literature found in case studies, professional journals and doctrinal publications. Until the mid-1990s, urban operations were regarded as a footnote to the broader consideration of war or specific campaigns, and most publications adopted a narrative approach. A thematic analysis is now more usual, though most accounts retain a tactical focus and there is remarkably little analytical or theoretical work relating urban operations to strategy or the wider security debate.[1] Even so, not only is the wealth of material available in English impressive but also some of the best work is freely available on the Internet.

Representative Material

Representative Western material divides approximately into four types: descriptive or eyewitness accounts of specific battles or operations, lists of lessons learned, analyses of specific issues or operations according to contemporary requirements, and doctrine. Many articles cannot, however, be neatly categorised; those in professional journals such as *Infantry* often provide eyewitness accounts of lessons learned based on contemporary needs. Relevant publications include the following, details of which are to be found in the Select Bibliography:

Narrative/eyewitness accounts

Military history (Beevor, 1998).
Memoirs (Wieder and von Einsiedel, 1993).
Eyewitness accounts Journalists (Gall and de Waal, 1997); participants (Ferry, 1994).

Lessons learned

(Thomas, 2000).

Contemporary requirements

Military dissertations (Lee, 2001).
Academic service publications (Spiller, 2001).
Articles in professional journals and magazines (Barley, 2001). There are few relevant articles before the mid-1990s. The years 1999–2000 saw an increase but this has since fallen.
Academic analyses Relevant material is often embedded in more general analyses (Duffield, 2001).
Articles in academic journals (Demarest, 1995). Few specifically address urban operations though many are relevant (Berdal, 2001).
Articles and news items in defence magazines (Eshel, 2001).
Consultancy reports (Glenn, 2000). Other sources include research institutes such as the Institute of Defense Analysis, VA.

Field manuals, official publications

(AFM 2, 1999). Many contain useful bibliographies (Joint Staff, 2000).

Journals, Magazines and Newsletters

The most consistently useful include:

After the Battle
Armed Forces Journal International
Armor

British Army Review
Center for Army Lessons Learned (CALL) Newsletters
Infantry
Jane's Intelligence Review
Joint Forces Quarterly (JFQ)
Marine Corps Gazette
Military Review
Parameters
Small Wars and Insurgencies

Internet Resources

The Web is fluid and sites and links may no longer exist (all the sources referred to here were downloaded 2000–03) but the range of doctrinal and historical material available is impressive. The most informative is American in origin and focus. Thus the single most valuable resource is the *Urban Operations Journal* (www.urbanoperations.com), while the most useful introductions to contemporary analysis are those of Spiller, 2001 (www.army.mil/multi/mout), Edwards, 2000 (www.rand.org), and the US Joint Staff's interim *Handbook for Joint Urban Operations*, 2000 (www.dtic.mil/doctrine).[2] Note that RAND's impressive series of publications may be downloaded free. See also the US Marine Corps and the US Army's Foreign Military Studies Office at:

www.concepts.quantico.usmc/mil/mout.htm
mcwl-www.cwlmain.org (USMC Warfighting Laboratory)
call.army.mil/call/fmso/fmsopubs
www.cascom.army.mil/multi/mout (CSS MOUT/Urban Operations Resource Page)

Additional US sites worth investigation include:

www.defenselink.mil/news (DoD website)
www.dia.mil
www.cia.gov
www.dtic.mil/jcs (*Joint Vision 2010*)
www-cgsc.army.mil
www.ndu.edu/ndu/inss (National Defense University)

www.web.mit.edu
http://www.usafa.af.mil (US Air Force).

For British material see www.mod.gov.uk (MoD). Ratified and draft UK and NATO doctrine can be found at the JDCC site (www.chots.mod.uk/jointwar/index.htm). For UK reportage on current conflicts see news services such as the BBC (news.bbc.co.uk/hi/english/world).

Film/Video

Pontecorvo, G., *Battle of Algiers* (1966)
Leisure View Video, *Total War: Battles of World War II*, vol. 3, Berlin (1998)
Dreamworld, *Saving Private Ryan* (1998)
DD Video, *The Unknown War: The Siege of Leningrad* (1994)
DD Video, *Battle for Berlin: The Last Great Battle in Europe* (1997)
Colombia Tristar, *Blackhawk Down* (2001)
GMH Entertainment, *Visions of War: Battle for Berlin* (1988)
GMH Entertainment, *Visions of War: The Siege of Leningrad* (1988)

Notes

1. This remains true for most militaries. When, for example, Tamari reviewed the state of knowledge regarding urban operations in the Israel Defense Force (IDF), 1948–82, he found no references to strategy. See D. Tamari, 'Military Operations in Urban Environments: The Case of Lebanon, 1982', in M. Desch, (ed.) *Soldiers in Cities: Military Operations on Urban Terrain* (Carlisle, PA: Strategic Studies Institute, US Army War College, 2001), p. 33.
2. The *Handbook* was a holding publication for Joint Publication 3-06, *Doctrine for Joint Urban Operations* (2002), but it remains an excellent introduction.

Select Bibliography

Aldis, A. (ed.), *The Second Chechen War*, Occasional, 40, (Strategic and Combat Studies Institute 2000).

Ahrari, E. 'Unrestricted War: The Leveller', *Jane's Intelligence Review* (February 2000), pp. 44–6.

Akers, F. and G. Singleton, *Task Force Ranger: A Case Study Examining the Application of Advanced Technologies in Modern Urban Warfare* (Oak Ridge, TN: National Security Program Office, 2000).

Army Field Manual (AFM) Vol. IV, *Operations in Special Environments, Part 5: Fighting in Built-up Areas (FIBUA)* (1993).

Army Field Manual Vol. IV – *Operations in Special Environments, Part 5: Operations in Built-up Areas (OBUA)* (1998).

Army Field Manual Vol. II, *Operations in Specific Environments, Part 5: Urban Operations* (1999).

Ashworth, G., *War and the City* (New York, NY: Routledge, 1991).

Barley, D., 'Are We Prepared for the Challenges of Future Operations in the Urban Environment?', *British Army Review*, 125 (2000), pp. 16–25.

Beadon, C., 'Patrolling in the Urban Environment', *Marine Corps Gazette,* 86, 5 (2002), pp. 49–51.

Beaumont, R., 'Thinking the Unspeakable: On Cruelty in Small Wars', *Small Wars & Insurgencies*, 1, 1 (1990), pp. 54–73.

Beevor, A., *Stalingrad* (London: Penguin, 1998).
Bell, J. Bowyer, *Besieged: Seven Cities under Siege* (Philadelphia, PA: Chilton Books, 1966).
Ben-Horin, R., 'Non-Lethal Weapons Theory, Practice, and what Lies Between', *Strategic Assessment*, 3, 4 (January 2001) (www.tau.ac.il/jcss/sa/v4n1p3.html).
Berdal, M., 'Lessons Not Learned: The Use of Force in "Peace Operations" in the 1990s', *International Peacekeeping*, 8, 1 (2001), pp. 55–74.
Bollens, S., *On Narrow Ground: Urban Policy and Ethnic Conflict in Jerusalem and Belfast* (Albany, NY: State University of New York, 2000).
Borowiec, E. and J. Stevens, 'Urban Patrolling : Experiences in Haiti', *Infantry*, 86, 4 (1996) pp. 8–10.
Bowden, M., *Black Hawk Down: A Story of Modern War* (NY: Atlantic Monthly Press, 1999).
Bowie, C., R. Haffa and R. Mullins, *Future War: What Trends in America's Post-Cold War Military Conflicts Tell Us About Early 21st Century Warfare* (Washington, DC: Northrop Grumman, 2003).
Boyko, R., 'Just Cause: MOUT Lessons Learned', *Infantry*, 81, 3 (1991), pp. 28–32.
Bracken, P., 'Urban Sprawl and NATO Defence', *Survival*, 18, 6 (1976), pp. 254–60.
Brown, K., 'The Urban Warfare Dilemma: US Casualties v. Collateral Damage', *Marine Corps Gazette*, 81, 1 (January 1997), pp. 38–40.
Burger, K. and A. Koch, 'Afghanistan: The Key Lessons', *Jane's Defence Weekly*, 37, 1 (2002), pp. 20–7.
CALL Newsletter 00-7: *Civil Disturbances* (call.army.mil/call/newsltrs/00-7/00-7toc.htm).
Chesterman, S. (ed.), *Civilians in War* (Boulder, CO: Lynne Rienner, 2001).
Coker, C., *Waging War without Warriors: The Changing Culture of Military Conflict* (Boulder, CO: Lynne Rienner, 2002).
Combat & Survival: What it Takes to Fight & Win, 4, 9, 18, 19, 23, 25, 26 (Westpoint, CT: H. Stuttman, 1991).
Connaughton, R., J. Pimlott and D. Anderson, *The Battle for Manila: The Most Devastating Untold Story of World War II* (London: Bloomsbury, 1995).

Cordesman, A., *The Second Intifada and the Lessons of Jenin: Dealing with the Grim Realities of Urban Warfare* (Washington, DC: Center for Strategic and International Studies, 2002).

Cordesman, A., 'The "Instant Lessons" of the Iraq War: Main Report', 28 April 2003 working draft (Washington, DC: Center for Strategic and International Studies) (www.csis.org/features/iraq).

Davies, R., 'Small Artillery Rockets Extend Range of Terrorist Attacks on Urban Centres', *Jane's Intelligence Review* (March 2002), pp. 32–3.

Demarest, G., 'Geopolitics and Urban Armed Conflict in Latin America', *Small Wars and Insurgencies*, 6, 1 (1995), pp. 44–67.

Desch, M. (ed.), *Soldiers in Cities: Military Operations on Urban Terrain* (Carlisle, PA: Strategic Studies Institute, US Army War College, 2001).

Dewar, M., *War in the Streets: The Story of Urban Combat from Calais to Khafji* (London: BCA, 1992).

Director of Infantry, *Future Infantry ... the Route to 2020* (2000).

Dodd, N., 'The Corporal's War: Internal Security Operations in Northern Ireland', *Military Review*, 56, 7 (1976), pp. 59–68.

Donnelly, C., 'Soviet Techniques for Combat in Built-up Areas', *Military Review*, 57, 11 (1977), pp. 37–48.

Donnison, F., *Civil Affairs and Military Government North-West Europe 1944–1946* (London: Her Majesty's Stationery Office, 1961).

Doubler, M., *Closing with the Enemy: How GIs Fought the War in Europe, 1941–1945* (Lawrence, KS: University Press of Kansas, 1994).

Duffield, M., *Global Governance and the New Wars: The Merging of Development and Security* (London: Zed Books, 2001).

Dunlap, C., 'Technology: Recomplicating Moral Life for the Nation's Defenders', *Parameters* (Autumn 1999).

Dunlap, C., 'The End of Innocence: Rethinking Noncombatancy in the Post-Kosovo Era', *Strategic Review*, 28, 3 (2000).

Dzirkals, L., K. Kellen and H. Mendershausen, *Military Operations in Built-up Areas: Essays on Some Past, Present, and Future Aspects* (Santa Monica, CA: RAND, 1976).

Edwards, S., *Mars Unmasked: The Changing Face of Military Operations* (Santa Monica, CA: RAND, 2000).

Eshel, D., 'The Al-Aqsa Intifada: tactics and strategies', *Jane's Intelligence Review* (May 2001), pp. 36–8.
Ferrell, B., 'The Battle of Aachen', *Armor*, 109, 6 (2000), pp. 30–6.
Ferry, C., 'Mogadishu, October 1993: Personal Account of a Rifle Company XO', *Infantry*, 84, 5 (1994), pp. 27–31.
Ferry, C., 'Mogadishu, October 1993: A Company XO's Notes on Lessons Learned', *Infantry*, 84, 6 (1994), pp. 31–8.
Gall, C. and T. de Waal, *Chechnya: A Small Victorious War* (London: Pan, 1997).
Gangle, R., 'Urban Operations in the 21st Century', *Modern Simulation & Training*, 4 (2000), pp. 6–13.
Gangle, R., 'Training for Urban Operations in the 21st Century', *Marine Corps Gazette*, 85, 7 (2001), pp. 26–8.
Gangle, R., 'Project Metropolis', *Marine Corps Gazette,* 86, 5 (2002), pp. 47–9.
Ganzglass, M., 'The Restoration of the Somali Justice System', *International Peacekeeping*, 3, 1 (1996), pp. 113–38.
Geibel, A., 'Brazzaville – The Congo: Dying Cities in An Unknown Civil War (1997)', *Infantry* (September–December, 1998), pp. 17–20.
Glenn, Russell, *'… We Band of Brothers': The Call for Joint Urban Operations Doctrine* (Santa Monica, CA: RAND, 1999).
Glenn, R., 'Fox Trot: Seeking Preparedness for Military Urban Operations', *Armed Forces Journal International* (May 1999).
Glenn, R., *Heavy Matter: Urban Operations' Density of Challenges* (Santa Monica, CA: RAND, 2000).
Glenny, M., *The Fall of Yugoslavia,* 3rd edn (London: Penguin, 1996).
Goodman, G., 'Counter-SAM Tactics: After 30 years, Shoulder-fired IR Missiles Still a Threat to US Aircraft', *Armed Forces Journal International* (November 2001), pp. 52–5.
Goure, D. 'Briefing: Intelligence, Surveillance and Reconnaissance', *Jane's Defence Weekly*, 27 February 2002, pp. 25–7.
Goure, L., *The Siege of Leningrad* (Stanford, CA: Stanford University Press, 1962).
Graham, S., 'Lessons in Urbicide', *New Left Review*, 19 (January–February 2003), pp. 63–77.
Grant, C., 'Operations and Doctrine: The 2015 Battlefield', *British Army Review*, 128 (2001–02), pp. 5–13.

Grau, L., 'The RPG-7 on the Battlefields of Today and Tomorrow', *Infantry* (May–August 1998), pp. 6–8.
Grau, L., 'Changing Russian Urban Tactics: The Aftermath of the Battle for Grozny', Foreign Military Studies Office, Fort Leavenworth, KS (call.army.mil/call/fmso/fmsopubs/issues/grozny.htm).
Grau, L. and J. Kipp, 'Urban Combat: Confronting the Specter', *Military Review*, 88 (July–August 1999), pp. 9–17.
Grau, L. and T. Smith, 'A Crushing Victory: Fuel-Air Explosives and Grozny 2000', *Marine Corps Gazette* (August 2000), pp. 30–3.
Grau, L. and T. Thomas, '"Soft Log" and Concrete Canyons: Russian Urban Combat Logistics in Grozny', *Marine Corps Gazette* (October 1999), pp. 67–75.
Györkei, J. and M. Horváth (eds), *Soviet Military Intervention in Hungary 1956: With a Study by Alexandr Kirov and Memoirs of Yevgeny Malashenko* (Budapest: Central European University Press, 1999).
Hahn, R. and B. Jezior, 'Urban Warfare and the Urban Warfighter of 2025', *Parameters* (Summer 1999), pp. 74–86.
Herd, G., 'The "Counter-Terrorist Operation" in Chechnya: "Information Warfare" Aspects', *Journal of Slavic Military Studies*, 13, 4 (2000), pp. 57–83.
Herbert, D., 'Non-lethal Weaponry: From Tactical to Strategic Applications', *Joint Forces Quarterly* (Spring 1999), pp. 87–91.
Hewson, H., 'Light/Attack Helicopter Operations in the Three Block War', *Marine Corps Gazette* (April 1999), pp. 25–7.
Hills, A., *Doctrine, Criminality, and Future British Army Operations: A Half-completed Understanding*, Occasional, 39 (Strategic and Combat Studies Institute, 2000).
Hills, A., 'Can We Fight in Cities?', *RUSI Journal*, 146, 5 (2001), pp. 6–10.
Hills, A., 'The Intractable Nature of Urban Operations', *Civil Wars*, 4, 2 (2001), pp. 99–120.
Hills, A., 'Hearts and Minds or Search and Destroy? Controlling Civilians in Urban Operations', *Small Wars and Insurgencies*, 13, 1 (2002), pp. 1–24.
Hollis, M., 'Platoon under Fire: Mogadishu, October 1993', *Infantry*, 88, 1 (1998), pp. 27–34.
Horne, A., *A Savage War of Peace: Algeria 1954–1962* (London: Papermac, 1987).

Huber, D., 'Fuel-air Explosives Mature', *Armor*, 110, 6 (2001), pp. 14–17.
Hutton, J., 'Use of Mortars in Military Operations on Urbanized Terrain (MOUT): A Review of Doctrinal and Associated Literature' (call.army.mil/products/trngqtr/tq4-99/mortars.htm).
Irving, D., *Apocalypse 1945: The Destruction of Dresden* (Cranbrook, WA: Veritas, 1995).
Jalali, A. and L. Grau, 'Night Stalkers and Mean Streets: Urban Guerrillas in Afghanistan', *Infantry* (January–April 1999), pp. 20–6.
Jane's Infantry Weapons 1999–2000 (Surrey: Jane's Information Group, 1999).
Jane's Police and Security Equipment 2001–2002 (London: Jane's Information Group, 2001).
Jane's World Armies (Surrey: Jane's Publishing, 2000).
Janzen, S., 'The Story of the Rocket Propelled Grenade', *Red Thrust Star* (April 1997), pp. 21–5.
Joint Publication 1-02, *Department of Defense Dictionary of Military and Associated Terms* (Washington, DC: 1994, amended 2000) (www.dtic.mil/doctrine/jel).
Joint Publication 1-02, *Doctrine for Joint Urban Operations* (Washington, DC: 2002).
Joint Staff, *Handbook for Joint Urban Operations* (Washington, DC: 2000).
Joint Warfare Publication (JWP) 0-01, *British Defence Doctrine*, 1st edn (London: MOD, 1996).
JWP 0-01, *British Defence Doctrine*, 2nd edn (Shrivenham: Joint Doctrine and Concepts Centre, 2001).
Kennedy-Pipe, C. and C. McInnes, 'The British Army in Northern Ireland 1969–1972: From Policing to Counter Terror', *Journal of Strategic Studies*, 20, 2 (1997), pp. 1–24.
Kilunin, V., 'New Views on Urban Warfare', *Military Thought*, 7, 3 (1998), pp. 41–3.
Klep, C. and D. Winslow, 'Learning Lessons the Hard Way – Somalia and Srebrenica Compared', in E. Schmidl (ed.), *Peace Operations Between War and Peace* (London: Cass, 2000), pp. 93–137.
Knights, M., 'Iraq Analysis: "Iraqi Freedom" Displays the Transformation of US Air Power', *Jane's Intelligence Review* (May 2003), pp. 16–9.

Knox, P. and P. Taylor, *World Cities in a World-system* (Cambridge: Cambridge University Press, 1995).
Korwin-Rhodes, M., *The Masks of Warriors: The Siege of Warsaw, September 1939* (New York, NY: Libra, 1964).
Kostof, S., *The City Assembled: The Elements of Urban Form throughout History* (London: Thames & Hudson, 1992).
Krulak, C., 'Operational Maneuver from the Sea', *JFQ* (Spring 1999), pp. 78–86.
Krulak, C., 'Urban Warrior: First Impressions' *Marine Corps Gazette* (June 1999), pp. 4–5.
Lamont, R., ' A Tale of Two Cities — Hue and Korramshahr', *Armor*, 108, 3 (1999), pp. 24–6.
Lamont, R., 'Urban Warrior – A View from North Vietnam', *Marine Corps Gazette* (April 1999), pp. 32–3.
Leaf, J., 'MOUT and the 1982 Lebanon Campaign: The Israeli Approach', *Armor* (July–August 2000), pp. 8–11.
Leaf, T., 'Thermobaric Weapons: A Weapon of Choice for Urban Warfare', Marine Corps Study Group (call.army.mil/call/spc_prod/mout/docs/thermodoc.htm).
Lee, M., 'A Curious Void: Army Doctrine and Toxic Industrial Materials in the Urban Battlespace', unpublished dissertation, School of Advanced Military Studies, Fort Leavenworth, KS (2001).
Legault, R., 'The Urban Battlefield and the Army: Changes and Doctrines', *Canadian Military Journal*, 1, 3 (2000) (www.journal.dnd.ca).
Lewer, N. and S. Schofield, *Non-lethal Weapons: A Fatal Attraction* (London: Zed Books, 1997).
Lieven, A., 'The World Turned Upside Down', *Armed Forces Journal International* (August 1998), pp. 40–3.
Lindsay, M., *So Few Got Through* (London: Collins, 1946).
McGill, I., 'British Forces: Kuwait in the Aftermath of the Gulf War', *British Army Review*, 100 (1992), pp. 73–83.
McInnes, C., *Spectator-sport War: The West and Contemporary Conflict* (Boulder, CO: Lynne Rienner, 2002).
McLaurin, R., P. Jureidini, D. McDonald and K. Sellers, *Modern Experience in City Combat* (Aberdeen Proving Ground, MD: US Army Human Engineering Laboratory, 1987).
Manyon, J., *The Fall of Saigon* (London: Rex Collings, 1975).

Margry, K., 'Battle for Aachen', *After the Battle*, 42 (1983), pp. 1–27.
Margry, K., 'Battle for Cologne', *After The Battle*, 104 (1999), pp. 2–37.
Margry, K., 'The Four Battles for Kharkov', *After The Battle*, 112 (2001), pp. 2–45.
Martins, M., 'Rules of Engagement for Land Forces: A Matter of Training, Not Lawyering', *Military Law Review*, 143 (Winter 1994), pp. 3–160.
Ministry of Defence, *Operations in Iraq: First Reflections* (London: MoD, 2003).
Mitchell, J. (ed.), *The Long Road to Recovery: Community Responses to Industrial Disaster* (Tokyo: United Nations University, 1996).
Moore, B., 'An Army for 2025+', *British Army Review*, 128 (2001–02), pp. 14–17.
Myrow, S., 'Waging War on the Advice of Counsel: The Role of Operational Law in the Gulf War', *USAFA Journal of Legal Studies*, 7 (1996/97) (www.usafa.af.mil/dfl/journal/volume7/Myrow.html).
National Intelligence Council, *Global Trends 2015: A Dialogue about the Future with Nongovernment Experts* (2000) (www.odci.gov/cia/publications/globaltrends2015/index.html).
Nichiporuk, B., *The Security Dynamics of Demographic Factors* (Washington, DC: RAND, 2000).
Oakley, R., M. Dziedzic and E. Goldberg, *Policing the New World Disorder: Peace Operations and Public Security* (Washington, DC: National Defense University, 1998).
Oliker, O., *Russia's Chechen Wars 1994–2000: Lessons from Urban Combat* (Santa Monica, CA: RAND, 2001).
O'Sullivan, P., *Terrain and Tactics* (London: Greenwood, 1991).
Owen, R. 'Urban Warfare in the Future: Balancing Our Approach', *British Army Review*, 128 (2001/02), pp. 25–33.
Patman, R., 'Beyond "the Mogadishu Line": Some Australian Lessons for Managing Intra-State Conflict', *Small Wars and Insurgencies*, 12, 1 (2001), pp. 59–75.
Pilloni, J., 'Burning Corpses in the Streets: Russia's Doctrinal Flaws in the 1995 Fight for Grozny', *Journal of Slavic Military Studies*, 13, 2 (2000), pp. 39–66.
Press, D., 'Urban Warfare: Options, Problems, and the Future', *Marine Corps Gazette* (April 1999), pp. 14–18.

Prior, W., '"We aren't here to do the decent thing": *Saving Private Ryan* and the Morality of War', *Parameters* (2000), pp. 138–45.
Puttré, M., 'Facing the Shoulder-fired Threat: The Air-superiority Myth Hits the MANPADS Mountain', *Journal of Electronic Defense*, 24, 4 (2001), pp. 38–45.
Qiao, L. and X. Wang, *Unrestricted Warfare: Assumptions on War and Tactics in the Age of Globalization* (Beijing: PLA Literature and Arts Publishing House, 1999).
Rabinovich, A., *The Battle for Jerusalem June 5–7, 1967* (Philadelphia, PN: Jewish Publication Society, 1987).
Roberts, A., 'NATO's "Humanitarian War" over Kosovo', *Survival*, 41, 3 (1999), pp. 102–23.
Rogers, A., *Law on the Battlefield* (Manchester: Manchester University Press, 1996).
Rosenau, W., '"Every Room is a New Battle": The Lessons of Modern Urban Warfare', *Studies in Conflict & Terrorism*, 20 (1997), pp. 371–94.
Scales, R., 'The Indirect Approach', *Armed Forces Journal International* (October 1998), pp. 68–74.
Schwartz, N. and R. Stephan, 'Don't Go Downtown Without Us', *Aerospace Power Journal* (Spring 2000), pp. 3–11.
Simunovic, P., 'The Russian Military in Chechnya: A Case Study of Morale in War', *Journal of Slavic Military Studies*, 11, 1 (1998), pp. 63–95.
Singer, P., 'Caution: Children at War', *Parameters* (Winter 2001/02), pp. 40–56.
Shemirani, S. Taheri,'The War of the Cities', in F. Rajaee (ed.), *The Iran–Iraq War: The Politics of Aggression* (Gainesville, FL: University Press of Florida, 1993), pp. 32–40.
Smith, R., 'The Use of Psychological Operations, and their Role in the Return to Normality in Bosnia-Herzegovina: A Company Commander's Perspective, February–May 1996', *British Army Review*, 114 (1997), pp. 13–19.
Spencer, D., 'Urban Combat Doctrine of the Salvadoran FMLN', *Infantry*, 80, 6 (1990), pp. 17–19.
Spiller, R., *Sharp Corners: Urban Operations at Century's End* (Fort Leavenworth, KS: US Army Command and General Staff College, 2001).
Stanton, M., 'Riot Control for the 1990s', *Infantry*, 86, 1 (1996), pp. 22–9.

Thomas, T., 'Air Operations in Low Intensity Conflict: The Case of Chechnya', *Airpower Journal* (Winter 1997), pp. 51–9.
Thomas, T., 'The Caucasus Conflict and Russian Security: The Russian Armed Forces Confront Chechnya III. The Battle for Grozny, 1–16 January 1995', *Slavic Military Studies*, 10, 1 (1997), pp. 50–108.
Thomas, T., 'The Battle for Grozny: Deadly Classroom for Urban Combat', *Parameters* (Summer 1999), pp. 87–102.
Thomas, T., 'Grozny 2000: Urban Combat Lessons Learned', *Military Review*, 80, 4 (2000), pp. 50–8.
Thomas, T., 'Asymmetric Threats and Attacks: Deciphering the Word Game', *Military Review*, 81, 3 (2001), pp. 32–7.
Trainor, E., 'El-Salvador: The Battle for the Cities', *Marine Corps Gazette* (1990), pp. 8–11.
Treverton, G. *Framing Compellent Strategies* (Washington, DC: RAND, 2000).
Trinquier, R., *Modern Warfare: A French View of Counterinsurgency*, trans. D. Lee (London: Pall Mall, 1964).
UN, *Geneva Convention Relative to the Protection of Civilian Persons in Time of War* (Geneva, 12 August 1949).
UN, *Protocol I and II Additional to the Geneva Conventions of 12 August 1949* (Geneva, 8 June 1977).
United Nations Centre for Human Settlements (UNCHS/Habitat) *An Urbanizing World: Global Report of Human Settlements* (Oxford: Oxford University Press, 1996).
Ungváry, K., *Battle for Budapest: 100 Days in World War II*, trans. L. Löb (London: I. B. Tauris, 2003).
US Marine Corps, *Marine Corps Concept Paper: Future Military Operations on Urbanized Terrain* (Quantico, VA: Marine Corps Combat Development Command, 1997).
US Marine Corps, 'Modern Urban Battles: Excerpt Summary from the *MAWTS-1 ACE MOUT Manual*' (www.urban operations.com).
US Marine Corps, 'Modern Urban Battle Analysis and Observations (Part 1): *MAWTS-1 Aviation Combat Element MOUT Manual* (www.urbanoperations.com).
US Marine Corps Combat Development Command, 'A Concept for Future Military Operations on Urbanized Terrain' (Quantico, VA: 1997) (www.concepts.quantico.usmc.mil/mout .htm).

US Marine Corps Warfighting Lab, *Urban Warrior: Conceptual Experimental Framework* (US Marine Combat Development Command, 1998).

US Marine Corps Reference Publication 5-12A, *Operational Terms and Graphics* (1997).

US Marine Corps Warfighting Publication (MCWP) 3-35.3, *Military Operations on Urbanized Terrain (MOUT)* (Washington, DC: USMC, 1998).

Vick, A., J. Stillion, D. Frelinger, J. Kvitky, B. Lambeth, J. Marquis and M. Waxman, *Aerospace Operations in Urban Environments: Exploring New Concepts* (Washington, DC: RAND, 2000).

Vinson, M., 'Structuring the Army for Full-spectrum Readiness', *Parameters* (Summer 2000), pp. 19–32.

War Office, *Fighting in Built-up Areas*, Military Training Pamphlet, 55, April 1943.

Warr, N., *Phase Green Line: The Battle for Hue, 1968* (NY: Ballantine, 1997).

Waxman, M., *Air Power as a Coercive Instrument* (Washington, DC: RAND, 1999).

Waxman, M., *International Law and the Politics of Urban Air Operations* (Washington, DC: RAND, 2000).

Wieder, J. and H. Graf von Einsiedel (Hrsg), *Stalingrad: Memories and Reassessments*, trans. H. Bogler (London: Arms and Armour, 1993).

Williams, M., 'Combat in Khafji', *Soldier of Fortune* (May 1991), pp. 48–52.

Wiseman, D., *The Second World War 1939–45. Army: Special Weapons and Types of Warfare,* Vol. II (London: War Office, 1952).

Zelinsky, W. and L. Kolinsky, *The Emergency Evacuation of Cities: A Cross-national Historical and Geographical Study* (Savage, MD: Savage, 1991).

Zhukov, V., 'Peculiarities of the Offensive in a Town', *Soviet Military Review* (January 1979), pp. 19–20.

Index

ABCA (American, British, Canadian and Australian Armies programme) 52
Aden 95, 97
Afghanistan 38, 39, 67, 147–9, 150, 175–6, 178, 182, 233–4
Air-land balance 67–8, 72, 78, 143–4
Airpower, role of 66, 71, 72–3, 74–75, 83; use of air assets, 77–9, 127–8, 145, 154; limitations, 75–6, 149, 160, 161. *See also* air-land balance, CAS, RAF, technology
Algiers, battle of 23, 108–10
Armour 78, 124, 145, 60, 161
Artillery 159
Asymmetry 4, 47, 20–1,120, 122, 130–2, 146
Axworthy, Lloyd 180

Baidoa 125–7
Blair, Tony 175, 178, 180
Bombay 99
Brazzaville 26
British Army 8, 42, 100, 163, 231. *See also* doctrine, FIST, Kosovo, Northern Ireland
C4ISR (command, control, communications and computer-based intelligence, surveillance and reconnaissance) 11, 67, 68, 69, 83
CAS (close air support) 72, 73, 77, 83, 123, 145–6
Casualties 66–7, 68, 210, 220–1
CIMIC (civil-military co-operation) 203
Cities 14–16, 23, 25, 66, 67 role of, 242
Civil society 176, 178–80, 190–1; limitations, 183–7, 188; during conflict, 190
Clausewitz 84, 155, 244, 245
COIN (counterinsurgency operations) 3, 49–50, 120, 126, 202, 203; definition, 92; IDF approach, 213
Collateral damage 197–1
Combined arms 10, 13, 44, 46, 56, 124, 150, 157, 160, 260. *See also* airpower
Control, definitions 205–6; 199–201, 202, 204; control variables, 11, 12, 209–10; of infrastructure, 12; of non-combatant control, 11–12, 81, 91, 202–3, 206, 208–9, 210, 213–4, 229; distinguishing non-combatants, 190. *See also* CIMIC, non-lethal weapons, ROE
Counterterrorism 92; Northern Ireland, 100–1, 104
Cultural factors 19, 36–7, 96–7, 124–5, 187, 210, 212

Development, conflict and 176–8, 182; DFID (Department for International Development) 201–2. *See also* Duffield
Density 250
Disaster management 225–6, 228, 247–9
Doctrine 39, 40, 41, 56–8, 223; doctrinal development, 40–1, 49; Australia, 52–3; Canada, 53; France, 53–4; Germany, 54; Russia, 54, 150, 153; Singapore, 54–5; China, 55–6; UK doctrinal development 47–52, 202–3, 214; US doctrinal development, 42–7; US doctrinal publications, FM 90-10-1 *An Infantryman's Guide*, 43; FM 90-10 *Military Operations on Urbanised Terrain*, 39; *Handbook for Joint Urban Operations*, 46; JP 3-06 *Doctrine for Joint Urban Operations*, 6, 44. *See also* RAF, training, urban operations
DTRA (Defense Threat Reduction Agency 234
Duffield, Mark 18–9
Dunlap, Charles 238, 240 fn12

EBO (effects-based operations) 214
Edwards, Sean 13, 93
Enforcement operations 117–21
FIBUA (Fighting in built-up areas) 6, 48
FINABEL (France, Italy, Netherlands, Germany, Belgium and Luxembourg) 52
FIST (Future Integrated Soldier Technology) 69–70
Flame 231–2

Germany (in 1945) 141, 198
Glenn, Russell 250
Grozny, battles of 70, 76, 78, 93–4, 144–5, 151–8, 221; costs of, 152–3; lessons of 153–8; warfighting laboratory, 158; civil society, 186
Guthrie, Sir Charles 181

Haiti 96
Hallion, Richard 76–7
Hanshin earthquake 228
Huband, Mark 96,127–8
Hue 74, 145
Human security 180
Humanitarian assistance 181, 182
Humanitarian war 18, 188–9, 229, 230, 245
Humphrey, Michael 250

IPB (intelligence preparation of the battlefield) 156, 227
Iraq, post-conflict 38, 81, 175,
ISAF (International Stabilisation and Assistance Force) 118, 128–30
Israel Defence Force (IDF) 64, 70, 77, 78, 160–1, 210, 213, 221. *See also* Jenin

Jenin 24, 64, 78, 141–2, 143, 146, 161
Joint operations 13, 42, 44, 46, 47, 51, 53, 56, 72, 74, 188, 207, 211, 223–4, 260. *See also* airpower, combined arms, doctrine, Operation Iraqi Freedom
Jones, Clive, 213

Kaldor, Mary 74
Kibera 95
Kigali 96
Kosovo 91–2, 97, 99,104–8, 111, 208, 230
Krulak, Charles 44–5, 94–5

Lieven, Anatol 220
Literature sources 267–70

Manila (1945) 145
Manoeuvre warfare 7, 11, 36, 43, 96
Media 128, 164 fn 1,
Mitrovica 207–8, 210
Mogadishu October 1993 80, 82, 98, 119, 121–3, 133, 221–2; lessons learned, 123–; air assets in 74, 77, 98; civil society, 185–6; ROE, 209
'Mouseholing' 64
Morale, importance of 189–90
Mortars 70, 159–60
MOUT (military operations on urban terrain) 5–6, 93; Northern Ireland, 102–4
MOUT ACTD (Advanced Concept Technology Demonstration) 45

Multinational operations, 79–82, 128–130, 259

NATO (North Atlantic Treaty Organisation) 3, 36, 38, 52, 73, 79–80, 208, 214, 222
'New security' 140, 173, 174–5, 176–8, 182. *See also* civil society, DFID, human security
Nigeria 99
NITAT (Northern Ireland Training Assistance Teams) 101, 111
Non-combatants 184, 198, 200, 204–5, 229, 230, 265
Non-lethal weapons 68, 210–13
North Korea 20, 63n38
Northern Ireland 49 93, 99–104, 111
Novel explosives 233–5, 236

OBUA (operations in built-up areas) 6, 48, 65, 66
Oliker, Olga 156
Operation Iraqi Freedom (2003) 8, 11, 25, 50, 67, 72, 73, 78, 143–4, 146, 150, 162, 231
Operation Just Cause (Panama, 1989) 132–3
Operational intensity 93
Ottawa convention 180, 235

Patman, Robert 127
Patrolling 97–8, 103, 105, 106, 110
Peace enforcement 117–121
Peacekeeping 49, 181
Policing 91–2, 93–4, 98,106; limits of, 104, 106–10; in peacekeeping, 106–8. *See also* Algiers, COIN, counter terorism, riots
Project Lincolnia 46, 201

Qana 207

RAF (UK Royal Air Force) 49; AP *3000*, 73, 84
RAND 46. *See also* Edwards, Glenn
Reno, William 18–9
Revolution in military affairs (RMA) 64, 258
Riots 98–9
Roberts, Adam 230
ROE (rules of engagement) 209
Rosecrance, Richard 251
RPG (rocket propelled grenade) 70, 77, 154, 158, 159
Rumsfeld, Donald 10, 79, 147, 148, 175
Saving Private Ryan 237
Security assistance 98. *See* also ISAF
Security environment 4, 8, 14, 18–19, 21–24, 38, 252, 253–4, 258–60; contingencies, 19–21, 173; demography, 17, 239, 258–9; globalisation, 17–19, 22; urbanisation, 13, 16, 258
Shadow states 18–19
Singapore 54–5; civil society, 183–4, 186–7
Spiller, Roger, 120

Tactics 130–5, 249. *See also* Tamari
Tamari, Dov 130, 249, 259
Technology 13, 64–66, 68–9, 70–1, 82–4, 144, 154, 235–7, 239, 254–6; low technology 70, 83; new technology, 68–70, 82–3; West's reliance on, 71, 265. *See also* airpower, artillery, Dunlap, Edwards, FIST, mortars, novel explosives, RMA, RPG, transformation, 'Western way of war'
Territoriality 8, 199, 250–1, 252
Thomas, Timothy 85n8, 131, 58
'Three block war' 94–5
Training, 64, 101–2, 110, 112, 244–5, 256–7
Transferability 111
Transformation 10, 147–50, 253–4
Transitional operations 50–1, 110, 132–3
Trinquier, Roger 204, 215, 245, 246

UAV (unmanned aerial vehicle) 68–9, 78–9
Unrestricted Warfare 55–6
Urban operations, definitions of 5–7; categorisation, 3, 7, 43, 50, 93–4, 142, 243; nature of, 7–13, 24–25, 27–28, 36, 64, 127–8, 150, 201, 220, 243, 250; pre-modern war, 12–3, 26–7, 142–3, 243; assumptions, 27–8; Cold War operations, 4; imagery of, 26, 127–8, 139, 258; dominant trends

in, 144, 147, 162, 200–1, 251–2; analytical challenges, 223–7; moral challenges, 12, 228–31, 237; policy challenges, 163, 220, 222, 238, 265; strategic challenges, 223–4, 227–8, 246, 260, 265, 266; contextual understanding, 26, 225–6, 246–51; urban hypothesis, 244–6, 264. *See also* flame, MOUT, FIBUA, OBUA, novel explosives, Tamari, warfighting
Urban Warrior 45, 67
Urbanisation 4, 8, 25, urban environment, 95–6, 134
Urbicide 14, 251
US Air Force 46
US Army 45
US Marine Corps 44, 45–6, 54, 94. *See also* 'three block war'

Vukovar 141, 143, 251

War economies 18, 128. *See also* Duffield, Reno
War on terrorism 3, 37, 39, 47, 133, 173, 176, 178, 252; 11 September 2001, impact of, 20, 21, 37–8
Warfighting 91, 106, 139, 140–2, 162, 244–5. *S*ee *also* Grozny
'Western way of war' 71, 265, 266